



FISH HEALTH MANAGEMENT GRANT F-75-R-15

January 1 – December 31, 1998

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ABSTRACT

This report contains a description of the activities of the Eagle Fish Health Laboratory, operated by the Idaho Department of Fish and Game, for the calendar year 1998. The primary charge of this program is to monitor, inspect, and improve the health of fish raised at 13 resident hatcheries, 11 anadromous hatcheries and satellites, and Eagle Hatchery, which rears ESA-listed salmon captive broodstocks. Results of these diagnostic cases are presented in the text by program and facility. The most significant pathogens encountered in the resident and anadromous programs were cold water disease, bacterial kidney disease, infectious hematopoietic necrosis virus, bacterial gill disease, and furunculosis. Bacterial kidney disease also caused considerable loss in one group of chinook captive broodstock. Infestations with the copepod parasite, *Salmonicola californiensis*, became severe in groups of Lemhi River chinook captives and manual removal trials were initiated as a control measure. The Idaho Department of Fish and Game fisheries managers, researchers, hatcheries, and Eagle Fish Health Laboratory pathologists utilized the wet laboratory during the year.

Wild salmonids from all regions of the state were examined for the parasite *Myxobolus cerebralis* that causes whirling disease. The only new occurrence of whirling disease this year was from brook trout *Salvelinus fontinalis* broodstocks from Henrys Lake. The Idaho Department of Fish and Game initiated research to determine the seasonal infectivity of *M. cerebralis* in the South Fork Boise River downstream of Anderson Ranch Dam. The staffs of both the Eagle Fish Health Laboratory and Eagle Hatchery supported this research.

The Eagle Fish Health Laboratory staff remained active participants in regional and national fish health issues. This included administering the Investigational New Animal Drug program through the United States Fish and Wildlife Service. Examples of additional liaison activities are included in the text.

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PERIOD COVERED BY THIS REPORT

This report covers activities for grant F-75-R-15 Federal Aid in Fish Restoration January 1 to December 31, 1998 by the Idaho Department of Fish and Game (IDFG).

FISH HEALTH MONITORING AND MANAGEMENT ACTIVITIES OF THE IDAHO DEPARTMENT OF FISH AND GAME

Resident Hatchery Activities

Fish Pathologist, stationed at the Eagle Fish Health Laboratory (EFHL), provides service for hatcheries which rear and plant resident species. The pathologist's duties include collection of samples from diagnostic and inspection cases for 11 culture facilities and their associated captive and feral broodstocks, monitoring diagnostic results, reporting results to hatchery management, recommending and supervising treatments, and preparing and maintaining files for Investigational New Animal Drug (INAD) reporting for each station. Samples were also obtained as part of a survey of wild salmonids of Idaho waters. In 1998, these activities generated 2 laboratory accessions for the wild fish survey, 39 diagnostic, 50 inspection, and 8 research cases for the resident program. The specific results for these cases are included in Appendix 1 and are listed by Department region and for each fish culture facility. A brief summary of those results and activities for each resident station follows.

American Falls Hatchery

No clinical disease episodes occurred at American Falls Hatchery in 1998. The pathologist visited the facility twice to visually survey the production raceways and to discuss programs with the hatchery manager, but chose not to sacrifice any fish for laboratory samples. This was the second consecutive year in which bacterial cold water disease (CWD), caused by *Flavobacterium psychrophilum*, was kept under control by good hatchery management techniques rather than by chemical therapy.

Ashton Hatchery

Ashton Hatchery was visited three times in 1998, with fish samples taken on two of those visits. Brook trout *Salvelinus fontinalis* and rainbow trout *Oncorhynchus mykiss* were inspected in July. No pathogens were detected from the brook trout, but carrier levels of *Aeromonas* and *Pseudomonas* bacteria were detected in the rainbow. The clinical disease caused by these organisms is called "Motile Aeromonad Septicemia" (MAS). The brook trout were checked again in August and diagnosed with bacterial gill disease. Densities were reduced and the problem resolved. Hatchery personnel reported the presence of *Gyrodactylus*, an external trematode parasite, but never at levels that required treatment.

The proximity of Ashton Hatchery to waters containing *Myxobolus cerebralis* (MC) the causative agent of whirling disease (WD) is of concern. Fully enclosing the hatchery intake would address this issue.

Cabinet Gorge Hatchery

Late-spawning kokanee *O. nerka kennerlyi* production at Cabinet Gorge Hatchery originates primarily from eggs taken at Sullivan Springs on Lake Pend Oreille. Smaller numbers of adults return to the hatchery ladder on the Clark Fork River. Spawning adults at these sites are sampled annually for fish pathogens. Positive test results from adults in 1998 included *Renibacterium salmoninarum* (RS) antigen from 1 of 12 pooled samples (x5) of Sullivan Springs fish and from 2 of 12 pools from Clark Fork River, using the enzyme-linked immunosorbent assay (ELISA). Antigen detection levels were very low. No replicating viruses or MC spores were detected.

Only one disease episode was reported in fish at Cabinet Gorge Hatchery during 1998. Hayspur rainbow trout fingerlings were diagnosed with MAS. An oxytetracycline (OTC) feed treatment was applied under the existing label with good results. Inspection sampling was done on two lots of kokanee fry and fall chinook juveniles. No pathogens were detected in the kokanee. The first inspection of fall chinook detected carrier levels of *Aeromonas*, and a single RS organism was detected from 1 of 10 fish by the fluorescent antibody test (FAT). The second chinook sample was done on a statistically significant number of fish (60), and no pathogens were detected. No clinical bacterial kidney disease (BKD) has been observed at Cabinet Gorge since the captive kokanee broodstock program was discontinued in 1994.

Clark Fork Hatchery

Infectious pancreatic necrosis virus (IPNV) and RS are the primary pathogens of concern at Clark Fork Hatchery, because the hatchery's open water source harbors wild brook trout that are proven carriers of both pathogens. No IPNV was isolated from fish in 1998, due primarily to the timing of sampling rather than to the absence of the virus. The 4-year-old westslope cutthroat *O. clarki lewisi* broodstock were sampled and no viruses, RS, or MC spores were detected. The fish were tested for RS using FAT on an ovarian cell pellet (OCP-FAT). The more sensitive ELISA test was not done due to a shortage of good reagents at the laboratory.

Fingerling Hayspur-strain Kamloops trout *O. mykiss* and cutthroat trout were diagnosed with CWD and/or MAS on six occasions during 1998. Almost all episodes involved concomitant infections by different species of bacteria, including *F. psychrophilum*, *A. hydrophila*, or *Pseudomonas*. Treatments of OTC-medicated feed were applied, either under INAD protocols or the existing label, with generally good results.

Clearwater Hatchery Resident Program

Hayspur-strain rainbow trout were sampled once at Clearwater Hatchery. A chronic case of CWD was diagnosed, which the hatchery personnel chose not to treat. No other viral or bacterial pathogens were detected.

Grace Hatchery

Six diagnostic and two inspection cases were examined at Grace Hatchery in 1998. One inspection case was done on the Saratoga-strain lake trout *Salvelinus namaycush*, from which no pathogens were detected. All other cases were Hayspur-strain rainbow trout.

One group of rainbow fry were examined because they were experiencing elevated mortality in the hatchery vats. Moderate levels of *Shewanella putrefaciens* were isolated. This bacterium is probably not a primary pathogen and may have been a contaminate from the gastrointestinal tracts. Losses moderated without treatment. Spring catchable rainbow trout were inspected and found to carry a light infection of *F. psychrophilum* with no clinical signs of disease. All other rainbow cases were diagnostic and all involved clinical CWD. Three cases were treated successfully with OTC.

Hagerman State Hatchery

A total of 22 diagnostic cases were examined at Hagerman State Hatchery in 1998. The peculiar losses in the hatchery vats occurred again and an etiologic agent continues to elude identification. Fry, on feed for 7-10 days, suddenly go off feed and move to the bottom of the vat. Fecal casts sometimes appear, and mortality shortly follows. Effected vats seemed to randomly both within the hatchery and between lots of fish. Changes in feeding practice initially seemed to reduced the number of groups effected, but have not eliminated the problem. The one common pathologic change is a swelling of the gill lamellae, often with external fungus or filamentous bacteria. It has not been determined if the gill problem is primary or secondary to the syndrome.

Losses in the outside raceways were attributed to infectious hematopoietic necrosis virus (IHNV), and bacterial infections. Frequent episodes of virus were experienced in 1998, (some confirmed by the Lab and some not), but the overall percentage of fish lost was reduced from levels of previous years. This may be attributed to a combination of bird exclusion nets over the large raceways, reconstruction of the Tucker Springs portion of the large raceway headrace, and management efforts to grow the fish to larger size before transfer to the large raceways. The worst losses were in the spring and early summer, when rearing densities were the greatest.

The most common bacterial disease was CWD, diagnosed in 12 of 19 cases. Several of those cases involved carrier or chronic levels of the bacterium rather than a significant epizootic. Each case that did involve losses serious enough to warrant drug therapy also involved concurrent episodes of MAS. Therefore, OTC-medicated feed was used under the existing label and did not require an INAD protocol. Responses to treatments were moderate to excellent in reducing mortalities, depending on how quickly the treatment was applied and whether or not IHNV was also involved. *Flavobacterium columnare* was isolated three times, each time in combination with CWD, MAS, or both.

Furunculosis (FUR), caused by the non-motile bacterium *Aeromonas salmonicida*, was diagnosed in four cases, all of which involved the same lot of Trout Lodge Kamloops *O. mykiss* held in separate raceways on Riley Creek water. The fish were treated successfully with Romet-30, because the isolate did not respond well to OTC *in vitro*. The pathogen is common in the Hagerman Valley, but this was the first documented outbreak at Hagerman State Hatchery since 1982. Hopefully, this will prove to be an isolated incident rather than from an established reservoir in Riley Creek, above the hatchery. If the latter, this would be another argument to change the production goals of Hagerman State Hatchery and to avoid rearing fish on this water source.

Hayspur Hatchery

The Resident Hatchery Pathologist's work at Hayspur Hatchery involved considerable effort to inspect broodstock and broodstock replacement lots, and to inject the adult broodstock with Penicillin-G. One clinical episode of CWD was diagnosed in juvenile (BY98) rainbow trout. These fish were treated with OTC-medicated feed with good results. Because these fish are broodstock

replacements, and not intended for human consumption, there was no need to use an INAD protocol.

The BY96 Hayspur-strain rainbow trout were inspected in March. No viruses, MC spores, *Nucleospora* inclusions, or bacteria were detected. The fish did test positive for RS antigen by ELISA (two of twelve 5-fish pools at very low levels). These fish were all held on spring/well water in the small raceways, which are in very close proximity to an open pond. Efforts have been made to exclude birds from these raceways using some light- to moderate-weight netting, although larger mammalian predators (e.g., otters or mink) can still penetrate the nets. Investment in solid predator screening around these raceways would greatly benefit the program.

All adult Hayspur-strain rainbow and Kamloops were injected with Penicillin-G approximately one month prior to spawning. The target dose level was 3000 IU/lb. The purpose of the injections was to inhibit transmission of *F. psychrophilum*, either horizontally within the pond, or via the eggs to the next generation. Penicillin-G was chosen in an attempt to use an injectable drug therapy that is not likely to cause future antibacterial drug resistance. The brood fish at Hayspur Hatchery are a contained population and no injected fish are used for planting or human consumption.

The major focus of the pathologist's work at Hayspur Hatchery was inspection of the brood populations. During the 1998 calendar year, a total of 383 female rainbow and Kamloops brood fish were tested for viruses (ovarian fluids), and RS by OCP-FAT. In addition, 120 females were sacrificed for kidney ELISA samples. No viruses were detected. *Renibacterium* was detected by OCP-FAT from two rainbow and three Kamloops, and RS antigen was detected by ELISA in 1 of 50 rainbow and in 20 of 70 Kamloops. Eggs from the FAT-positive females and from those with an ELISA optical density above 0.110 were culled from the replacement broodstock lots.

Henrys Lake Hatchery

Fish health inspection samples were taken from spawning Yellowstone cutthroat *O. clarki bouvieri* at Henrys Lake Hatchery from March 5 through May 4, 1998. Ovarian fluids were collected by hatchery personnel and shipped to the EFHL where they were tested for viruses (399 females in 57 seven-fish pools) and RS by OCP-FAT (1435 females in 205 seven-fish pools). A group of 60 fish (both males and females) were sacrificed for kidney FAT, virology, bacteriology (12 fish) and *Myxobolus* tests. No viruses were detected in any of the samples (both tissues and ovarian fluid). *Renibacterium* was detected by OCP-FAT in three ovarian pools but no organisms were detected in the kidney FAT samples. Eggs from the positive pools were discarded. Bacteriology samples showed carrier-level infections of *F. psychrophilum* in 3 of 12 fish. No *Myxobolus* spores were detected in this sample by the digestion method, although this population was confirmed positive for MC in 1996.

No brook trout were spawned in 1998 since this program was discontinued because of concern with introgression with ESA-listed bull trout *Salvelinus confluentus*.

Mackay Hatchery

No clinical diseases were reported at Mackay Hatchery in 1998. Pathologists visited Mackay once in 1998, when inspection samples were taken from kokanee salmon, rainbow trout, and brown trout *Salmo trutta*. Tests included virology, bacteriology, kidney FAT for RS, and MC. No reportable pathogens were detected from any population, although a carrier state of *Pseudomonas* was detected in the Payette Lake-strain kokanee salmon. No MC spores were detected in any

population. Production fish at Mackay Hatchery have never tested positive for MC, but the parasite has been found in fish from the settling pond. This proximity to the production raceways causes concern over the possibility of transmission via animal vectors. Investment in fences and screens would be highly desirable.

McCall Hatchery Resident Program

The westslope cutthroat trout run at Fish Lake was so low in 1998 that no samples were taken. Detection of RS antigen by ELISA from this population was fairly constant in the previous five years, ranging from 70 to 90%. But it is uncertain if RS is having any direct impact on this population, since no signs of clinical disease have ever been detected from spawning fish. Environmental problems, (high temperatures, low oxygen, late-summer algae blooms, etc.), poaching, or something else may be the cause of the decline in this population. If this genetic stock is still desirable for Department programs, it may be necessary to transplant it to some other rearing situation.

Nampa Hatchery

Bacterial CWD and MAS (primarily *A. hydrophila*) were the two most common diseases diagnosed in rainbow trout at Nampa Hatchery in 1998. Various bacteria species were found in the brown trout, which may not have been definite causes of disease. Not all episodes were severe enough to warrant treatment. The OTC-medicated feed was used to treat MAS under the existing label when losses became unacceptable. No INAD protocols were used in 1998. Response treatment was generally good.

Nampa Hatchery personnel operated the early kokanee salmon spawning weir on the Deadwood River, upstream of Deadwood Reservoir. Eggs were taken, fertilized, and shipped green to Mackay Hatchery and Cabinet Gorge Hatchery. A total of 60 spawning fish were sampled (both sexes). No replicating viruses were detected, nor were any spores of either MC or *Ceratomyxa shasta*. *Renibacterium* antigen was detected at very low levels in 2 of 12 pools (x5) of kidney tissue, but no signs of clinical BKD were detected. This low-level carrier state of RS is consistent with results of previous years.

Maintenance of the bird and animal exclusion structures and care in importing eggs from certified sources should be successful in maintaining healthy fish at this Nampa Hatchery. Priority should be given to reducing CWD through both chemical therapy and hatchery management.

Sandpoint Hatchery

Sandpoint Hatchery's main pipeline, which collapsed on December 31, 1996, was finally repaired in 1998. Westslope cutthroat trout eggs were obtained from a certified disease-free source in Montana, and the resulting fry were held in hopes of establishing a broodstock population to replace the fish that were lost when the pipe collapsed. These fish were very small at the end of the year, and so were not inspected.

Anadromous Hatcheries

The Department hatchery facilities and associated satellite release and adult capture stations for steelhead *O. mykiss* and chinook *O. tshawytscha* are funded through Lower Snake River Compensation Plan (LSRCP) and Idaho Power Corporation (IPC) contributions. The annual summary of results for the hatcheries and satellite stations is presented in Appendix 1. In 1998, a total of 181 inspection and diagnostic cases were done by the EFHL for the Anadromous Hatchery Program.

Clearwater Hatchery and Crooked River, Powell, and Red River Satellite Facilities

Clearwater Hatchery

The Clearwater Hatchery produces steelhead and chinook in conjunction with Crooked River, Powell, and Red River satellite facilities. Dworshak National Fish Hatchery provides steelhead for Clearwater's steelhead program. A total of 61 inspection and diagnostic cases were attributed to these facilities. In 1998, disease epizootics did not occur in juvenile chinook. Broodstock examinations detected IHN in Dworshak National Fish Hatchery steelhead. In adult samples, WD was not confirmed.

The production of juvenile steelhead was virtually free of pathogens during this past brood year (Appendix 1). Steelhead health was exceptional, as no pathogens were detected during most of 1998.

Crooked River Satellite Facility

Juvenile fish were not reared at this facility during 1998. All brood fish trapped at this facility were transported to Red River Satellite and spawned at this facility. To facilitate management, the South Fork of the Clearwater River spring chinook was created from combining Crooked River fish and Red River fish.

Preliberation samples for the spring release of the BY96 S.F. Clearwater spring chinook did not detect pathogens except in two of four ELISA samples. Both positives had low ELISA optical densities. The autumn release of the same stock of fish did not detect pathogens except in the ELISA samples for RS. All four pools were low positive optical densities.

Powell Satellite Facility

Juvenile fish were not reared at this facility during 1998. Brood fish were trapped, spawned and sampled for disease during 13 spawning days. The ELISA for BKD segregation was performed virology and WD samples were taken and sent to EFHL. Only RS was found during ELISA sampling.

Red River Satellite Facility

During 1998, juveniles were reared at this facility. No pathogens were detected during preliberation sampling.

Chinook brood fish trapped at Red River and Crooked River satellites were spawned at Red River and sampled for BKD utilizing ELISA technology. Viral and WD samples were also examined. Only *Renibacterium* and IHNV were the only pathogens detected during routine brood sampling.

Magic Valley Hatchery

Dworshak, East Fork, Pahsimeroi, and Sawtooth steelhead stocks required 15 inspection trips during 1998 at the Magic Valley Hatchery. Only one diagnostic trip was performed at Magic Valley Hatchery, which found eight of eight sampled fish positive for *F. psychrophilum*. Mortalities were not high enough to warrant medicated feed treatment.

The organosomatic index demonstrated a very robust fish, with plenty of stored energy. In 1998, neither IPNV nor MC, the causative agent of WD were found at Magic Valley Hatchery. To curtail any chance of horizontal transmission of etiologic agents a stringent disinfection program has been applied to this hatchery on an annual basis.

McCall Hatchery

Thirty-three inspection and diagnostic cases were processed from McCall Hatchery and South Fork Trap, the satellite facility that traps chinook brood fish for McCall, during 1998. Serious pathogens were not detected at McCall Hatchery during this calendar year. Only ELISA testing, during preliberation, found low optical densities for RS in the BY96 chinook.

A benefit of the segregation program is that production fish were not exposed to RS transmitted horizontally from carrier fish. Fish health programs have been successful at McCall Hatchery. The BKD high segregation groups should be reared at lower density, given better feed, and longer and more frequent prophylactic treatments of erythromycin-medicated feed. With improved culture, high BKD segregation groups produce returning adults.

An extra vitamin pack, added to the normal feed ration, has reduced spring mortality at this facility. Apparently, a nutritional deficiency during early rearing killed 30 fish per raceway per day, for two weeks. The component missing from the diet not been identified. The "EIBS-fortified diet" from Bio-Oregon has stopped this mortality.

The South Fork Trap had 21 accessions logged into the EFHL during 1998. Brood South Fork summer chinook were examined for RS, MC, and viral replicating agents. MC and viral replicating agents were not detected. Using ELISA, RS was detected. The ELISA optical density data was utilized to choose which egg lots were to be culled. Egg lots from high optical density females represent the greatest risk for horizontal transmission of RS. The egg lots measured at 0.4 optical density or above were culled from the hatchery program. The EFHL is able to make a culling or segregation program to fit the needs of each IDFG chinook hatchery.

Niagara Springs Hatchery

Fifteen inspection or diagnostic cases were attributed to Niagara Springs Hatchery during 1998. Hells Canyon and Pahsimeroi steelhead stocks were examined and IHNV and CWD were responsible for mortality.

In order to improve fish health at Niagara Springs Hatchery, several impediments to fish culture are in the process of being corrected. The nursery has been expanded and improved, thus

drastically reducing suffocation of fry during early rearing. The spring water supply should be enclosed and the bridge over the spring sealed to keep spillage from fish transport trucks from contaminating the spring. Furthermore, a near complete exclusion of piscivorous birds from the hatchery (by installing netting/wire) has been accomplished. An aggressive immunization program against furunculosis has kept mortalities to this infectious agent to a minimum. Furunculosis was not detected on this facility during this reporting period. Future endeavors should focus on inventory manipulations to maintain densities below stressful levels and to manage around opportunistic pathogens such as *Flavobacterium*.

Oxbow Hatchery

Three inspections were made to Oxbow Hatchery. Steelhead A group (STA) adults were examined during spawning for IHNV, IPNV, RS and WD. Pathogens were not detected at this facility during 1998.

Pahsimeroi Hatchery

Samples of steelhead and chinook from Pahsimeroi Hatchery resulted in 22 laboratory accessions to the EFHL in 1998.

Adult STA strain and adult and juvenile summer chinook were sampled for pathogens. No evidence of virus was detected in any adult group. *Renibacterium* could be detected by ELISA, but typically at low levels. Juvenile chinook will become positive for WD when reared on river water, as WD is endemic to the drainage. Signs of clinical WD became apparent during the fall and winter months. The parasite was detected in adult chinook, but not adult steelhead. The IHNV was detected in a test lot of steelhead fry reared on river water at the lower facility raceways. These fish were destroyed.

Salmonids reared at Pahsimeroi Hatchery have been positive for WD for almost a decade and 1998 was no different. All of the fish were early-reared on well water at Sawtooth Hatchery to avoid early exposure to the parasite MC. Once the fish reached a minimum of seven cm, they were ponded at the upper facility at Pahsimeroi Hatchery. By preliberation sample, these fish had low levels of MC infection by digest.

Prophylactic treatments of erythromycin-medicated feed were administered twice, in accordance with Pahsimeroi Hatchery's INAD protocols. *Renibacterium* was found in 4 of 20 fish via DFAT methods. ELISA samples were lost.

Completion of egg incubation and early rearing of fish is done at Sawtooth Hatchery, utilizing specific pathogen free (SPF) water source to reduce exposure to the infective stage of MC. In conjunction with IPC, the hatchery staff and EFHL staff, are exploring many options to manage around MC infection. A better water source is needed, especially for early rearing. Local springs are being analyzed for volume, water chemistry, temperature, gas saturation and other parameters. This is an opportunity for IDFG and IPC to work together to overcome this problem.

Rapid River Hatchery

Twenty-seven inspection and diagnostic cases were made with samples from Rapid River Hatchery during 1998. The majority of these cases were brood samples, primarily establishing ELISA titers for ELISA-based segregation and culling.

Pathogens and diseases detected in juvenile spring chinook include RS by ELISA and CWD.

External mycosis, "Fuzzy-tail," which had been a perennial problem at this hatchery in the late 80's and early 90's was virtually non-existent. Pooled kidney samples, examined via ELISA methods, had two of four pools positive for RS (all low titers) for preliberation samples. No fish were found to be positive for RS via DFAT. *Flavobacterium psychrophilus* was found in routine examinations during random inspection sampling.

The BKD culling and/or a segregation program should be continued to maintain fundamental fish health conditions. Fish should also be fin clipped when water conditions are optimal concerning sediment load and temperature.

Sawtooth Hatchery

Thirty-three cases were made to check juvenile and brood fish at Sawtooth Hatchery in 1998. Juvenile stocks examined at this facility were Sawtooth, Pahsimeroi chinook stocks, and Redfish Lake sockeye. In addition, samples were taken or obtained from adult East Fork Salmon River steelhead and Sawtooth steelhead. No evidence of virus resulted. While BKD antigen was detectable in adults of both species, clinical BKD did not cause mortality in chinook this year. This may be due to more prolonged rearing on well water. This has also resulted in decreased detection of WD in chinook, since the river water supply has been demonstrated to carry the infectious stage of MC.

Fish health at Sawtooth Hatchery was excellent for most of the BY98 Sawtooth spring chinook. No acute losses were experienced at Sawtooth Hatchery this year.

Organosomatic indices of randomly collected fish were excellent. The parasite MC was found in 2 of 4 groups. It continues to be very important to rear the chinook at Sawtooth Hatchery until at least 75mm on SPF well water. Expanding the well-water supply would also reduce incidence, intensity and prevalence of RS.

Sockeye and Chinook Captive Broodstock

The IDFG facilities at Eagle include both the EFHL and the Eagle Hatchery, which is dedicated to rearing ESA-listed Redfish Lake sockeye salmon *O. nerka* captive broodstock to maturity and the resulting progeny for release. This program began in 1991 and continues to the present.

A similar experimental project was initiated in 1995 to include rearing ESA-listed chinook from collections of wild parr from three Idaho rivers. The site selected for the freshwater rearing portion of this project was Eagle Hatchery, which shares grounds with the EFHL. The marine site was the National Marine Fisheries Service's (NMFS) Manchester Marine Laboratory. Both the sockeye and chinook programs generate considerable case workload for the EFHL. Program activities for 1998 are reported by species.

Redfish Lake Sockeye Salmon Captive Broodstock

A total of 115 fish at EFHL were examined from brood years 1994, 1995, 1996, and 1997 of the sockeye broodstock program. Important findings included documenting two lymphosarcomas and a single hepatic tumor; the lack of replicating virus and only a single case of BKD, indicating that quarantining efforts were successful; a motile aeromonad in progeny which caused loss; and an undetermined condition or syndrome which may have a nutritional or water chemistry origin.

The BKD control efforts have been applied to broodstock at both Eagle Hatchery and Manchester. All adult spawners and males used for cryopreservation were sampled for the presence of virus and BKD. This totaled 218 adults for Eagle Hatchery alone. The Stanley Basin Sockeye Technical Oversight Committee developed a management plan for rearing progeny, based on the ELISA optical density of kidney tissue of female parents. Cut-off optical density values were employed to prevent the reintroduction of BKD positive eggs into Eagle Hatchery and Sawtooth Hatchery. These ELISA-based segregation and rearing practices are designed to reduce the risk of having BKD in returning adults. The IDFG believes that by these practices, there will be an advantage toward recovery if the returning adults are free of BKD.

Salmon River Chinook Captive Rearing

This marked the fourth year in which collections of wild parr were made for Idaho ESA-listed spring chinook for an experiment to test the feasibility of raising chinook parr to maturity in fish culture facilities. During September 1998, BY97 parr were collected from the Lemhi River and West Fork Yankee Fork. Collected parr were initially reared at Sawtooth Hatchery and subsequently transferred to Eagle Hatchery in November. When smolted, the groups were divided into those destined for saltwater rearing at Manchester Marine Laboratory and those retained at Eagle Hatchery for freshwater culture. The EFHL continued to participate in this program in the capacity of lending fish health and sperm cryopreservation support and in processing and storing samples for genetic analysis.

Important pathology findings included the presence of BKD, MC, and the copepod gill parasite, *Salmincola californiensis*. The copepod parasites were detected when parr were collected from the Lemhi River. The level of copepod infestation and resulting gill necrosis became severe enough to arrest growth in the BY95 and BY96 groups. We began manual removal of the parasites about every three weeks in an attempt to reduce the infestation. This was only partially effective. Studies on therapeutic treatments were initiated in the wet lab to find a less stressful method of control.

Some males that matured from both the freshwater and saltwater locations as three-year-olds were released back to their natal streams. Additionally, sperm of males from two stocks was cryopreserved at EFHL. The fish health problems with these wild-origin parr has forced a reconsideration of starting similar programs from eggs which can be surface disinfected with iodine.

IDAHO WILD FISH HEALTH SURVEY

An examination of samples obtained from wild fish in the State of Idaho has been ongoing at the EFHL since the mid-1980s. The distribution of MC and the impact of the parasite on wild and hatchery salmonid populations has been a concern of the IDFG since 1987, when it was detected in trout which contracted the infection from Idaho waters. Efforts in 1998 were to support IDFG fisheries research on infection levels in natural produced salmonids in the Big Wood River drainage,

investigation into the seasonal effect on infectivity in the South Fork Boise River, and from naturally infected trout of the Henrys Fork Snake River, North Fork Boise River, and Middle Fork Salmon River.

The only new location for MC in Idaho waters was from wild cutthroat trout from the mainstem of the Middle Fork Salmon River at Marble Creek. This observation extends the distribution upstream by twenty river miles. The infection was confirmed with the new nested polymerase chain reaction technique (PCR). Both MCspores and those of neurotropic *Myxobolus* spp. (possibly *M. neurobius*) were found in these cutthroat.

Yellow perch from Cascade Reservoir were examined to investigate whether there was a fish health explanation to a severe population decline. Multiple parasitism was identified in the samples of young fish but probably was not responsible for the decline.

The lab shared its fish health database with the USFWS Wild Fish Disease Survey and with Steve Intelman, a graduate student of Dr. Christine Moffitt, University of Idaho. The graduate student project provided a display of pathogen occurrence in the western states and is an important effort in risk assessment modeling. The database of the lab has extensive fish health observations made over many years, which is useful at the regional and national level to understand how pathogens operate in wild fish populations. Some of these historic observations are from species that are currently ESA-listed, such as bull trout in Idaho.

TRANSPORTATION AND IMPORTATION PERMITS

The EFHL issued 69 transport or import permits for the IDFG Fisheries Bureau and regional offices during 1998. These permits are required when non-aquaculture species are released to public waters of the State of Idaho. Most (43) of these dealt with grass carp (white amur) *Ctenopharyngodon idella* to be used for biological control of aquatic vegetation. The IDFG policy requires that grass carp be certified free of Asian tapeworm and to be sterile triploids. The United States Department of Agriculture Laboratory at Stuttgart, Arkansas generated the certification for both conditions. Other permits were issued to the NMFS for importation of Redfish Lake sockeye smolts for release and adults for volitional spawning; to the USFWS for research activities in the Clearwater River system; to the Kootenai Tribe of Idaho for culture and release actions with endangered white sturgeon *Acipenser transmontanus*; to the Nez Perce Tribe for fish culture activities; and to the University of Idaho Aquaculture Research Institute.

REPORTS AND PRESENTATIONS

Reports generated by the EFHL include the Annual Resident Hatchery report for 1998 and the monthly LSRCP and Idaho Power Company facilities disease summary reports. Presentations were given on the fish disease status in Idaho at the anadromous fish management meeting; at the IDFG hatchery managers' meeting; at the Pacific Northwest Fish Health Protection Committee (PNFHPC) semi-annual meetings; the Western Fish Disease Workshop; and Northwest Fish Culture Conference.

The EFHL personnel attended six meetings of the Snake River Sockeye Technical Oversight Committee and the Chinook Captive Rearing Technical Oversight Committee during 1998. We also participated in the Whirling Disease Foundation Symposium, Idaho Chapter of AFS, project review of captive broodstock technology by the NWPPC, NMFS genetics review, and LSRCP status review workshop.

PRODUCTION STUDIES AND SURVEYS TO ENHANCE FISH HEALTH

The wet lab at EFHL was used by IDFG research biologists to evaluate triploid induction techniques with rainbow trout, studies on WD, safety of Azithromycin with chinook salmon, Efficacy of Fumagillin for control of WD with the USFWS, and investigation of vertical transmission of BKD in rainbow trout.

For several years, OTC injections have been given to brood rainbow trout at Hayspur Hatchery to inhibit possible vertical transmission of *F. psychrophilum*, which is a problem at hatcheries receiving eggs from Hayspur Hatchery. The primary recipients of these eggs are American Falls, Grace, Nampa, and Hagerman hatcheries. No control groups have been available to test the efficacy of these injections.

We processed and read samples to support an IDFG research project examining the cause and extent of electrofishing injury.

We were able to apply the expertise of Dr. Ron Roberts, University of Sterling, Scotland (ret.) who has been on sabbatical leave with the University of Idaho Aquaculture Research Institute. Dr. Roberts suggested several treatments to investigate for the control of *Salmincola*. These studies are currently in progress.

Staff of the EFHL have cooperated during 1998 with cohorts in the fish health and fisheries management fields through the forum of the PNFHPC (California, Oregon, Washington, Montana, British Columbia, Alaska); Rocky Plains Fish Health Committee (Arizona, Nebraska, Colorado, Nevada, Utah, New Mexico, North Dakota, and South Dakota); membership in the American Fisheries Society, Fish Health Section; cooperative ESA broodstock efforts (U. S. Fish and Wildlife Service, National Marine Fisheries Service, Shoshone-Bannock, and Nez Perce tribes, Bonneville Power Administration); universities (University of Idaho, Washington State University, University of Washington, Oregon State University, University of California-Davis, University of British Columbia, Malaspina College, and the College of Southern Idaho); and with the Whirling Disease Foundation.

Staff of the EFHL performed inspections of three private aquaculture facilities that import live fish into Canada. This service is provided free of charge and enhances export of Idaho aquaculture products.

RECOMMENDATIONS

The close proximity of surface waters which have been demonstrated to contain the infectious stage of MC to waters used for fish culture at IDFG hatcheries requires diligence of all culture personnel to ensure that contamination does not occur. This is true for Ashton, Hayspur, Henrys Lake, and Mackay hatcheries.

Cold water disease is the most universally encountered pathogen in IDFG hatcheries, including Hayspur Hatchery broodstocks. Pathologists with the California Department of Fish and Game have demonstrated that the pathogen can be vertically transmitted and that Penicillin G can be effective in preventing vertical transmission. We recommend to continue to apply the practices developed in California at Hayspur Hatchery for CWD control. We will try an autogenous CWD vaccine to see if it could also be useful.

Considerable progress has been made in the control of BKD in chinook cultured at all anadromous stations. This has occurred through diligent application of a four-pronged program including injection of all adult females with Erythromycin, 100% sampling of females by ELISA, segregation or culling of eggs from females deemed "highs" by ELISA, and two treatments of progeny with Erythromycin. This program has been very effective. Clinical BKD in progeny has been restricted to those of "high" females and the prevalence of BKD "high" adult females has been gradually decreasing over the last two generations. In general, pre-spawning mortality of all adults has been reduced. This program must continue as the highest fish health priority for chinook hatcheries into the future.

Expansion of the pathogen-free well water at Pahsimeroi Hatchery needs to be given a high priority for funding by Idaho Power Company. The current program by which Pahsimeroi chinook are reared at Sawtooth Hatchery until a length of seven cm has created considerable competition for well-water between programs. This has been exacerbated by additional demand for eyed steelhead eggs for egg-box programs that IDFG cooperates with the Shoshone-Bannock Tribe on. Development of additional pathogen-free water at Pahsimeroi Hatchery would alleviate the competition between programs.

The practice of collecting naturally produced parr to initiate broodstocks of the chinook captive rearing program needs to be re-evaluated. Losses to BKD and the handling stress from *Salmincola* control efforts have been unacceptably high and has limited the number of mature adults produced. The Washington Department of Fish and Wildlife has been successful in removing eyed-eggs from naturally-produced redds by hydraulic pumping. This technique should be tried on an experimental basis by IDFG and could avoid health-related problems in this program.

The IDFG has cooperated with the program of the International Association of Fish and Wildlife Agencies for registration of additional therapeutic agents for aquaculture. Progress toward FDA registration has been slow although there has been expansion of label claims for several compounds. Funding from IDFG has come from license sources and is in short supply. We continue to support the participation of IDFG in this process but this participation will need to be scrutinized annually for measured progress toward realistic goals of registrations by FDA.

ACKNOWLEDGEMENTS

The staff of the EFHL would like to express our appreciation to the Lower Snake River Compensation Plan, Idaho Power Company, Sport Fish Restoration, and the sportsmen of the State of Idaho for the financial support of our programs. We also greatly appreciate the assistance provided by the fish culture personnel of all the IDFG hatcheries in obtaining samples when our staff could not be present. This has been a big help and has helped to keep costs down. The cooperative INAD programs of the USFWS and University of Idaho have allowed access to therapeutic compounds while they are in the process of registration by the FDA. The help of the hatchery staffs in the INAD process has likewise been appreciated.

APPENDICES

FISH HEALTH SUMMARY REPORT 1998

Appendix 1. Fish Health Summary Report 1998. Idaho Department of Fish and Game
Eagle Fish Health Laboratory

1/1/98 TO 12/31/98

LOCATION	Stock	Class	Species	Log #	Sample Date	IHN	IPW	EBB	BKD	FUR	ERM	CWD	WHO	CSH	ICH	Exam Type	Diagnosis	Page 1
1 PANHANDLE REGION																		
WILD	DEEP CREEK (KOOTENAI)	D	RAINBOW TROUT	98-140	4/30/98												WILD FISH	NO PATHOGENS DETECTED, WHD 0/17 (DIGEST ONLY)
2 CLEARWATER REGION																		
WILD	CROOKED RIVER	D	BULL TROUT	98-247	7/30/98				+								WILD FISH	RS, NO CLINICAL SIGNS, ELISA 5/5 (O.D.s = 0.417, 0.415, 2.235, 1.080, 0.508), FAT 0/5, PCR(RS) 0/4, WHD 0/5
3 SOUTHWEST REGION																		
WILD	S.F. BOISE RIVER	D	RAINBOW TROUT	98-271	8/15/98												WILD FISH	WHD; MYXOBOLUS CEREBRALIS 1/1 (X5), DIGEST ONLY
BROOD	DEAD WOOD RESERVOIR		KOKANEE, EARLY SPAWNER	98-330	9/9/98	-	-		+						-		INSPECTION	RS; VIRO 0/60, ELISA 2/12 (x5, VERY LOW), WHD 0/60, CSH 0/20
4 MAGIC VALLEY REGION																		
WILD	S.F. BOISE RIVER	D	RAINBOW TROUT	98-305	8/25/98				+								WILD FISH	RS; FAT(BKD) 0/20, ELISA (BKD) 4/4(x5, ALL HIGH), WHD 0/20 (DIGEST ONLY)
6 UPPER SNAKE REGION																		
WILD	HENRYS FORK	D	RAINBOW TROUT	98-009	1/8/98												WILD FISH	WHD; MYXOBOLUS CEREBRALIS 6/6 (DIGEST), HISTO CONFIRMED 3/6
WILD	HENRYS FORK		RAINBOW TROUT	98-010	1/8/98												WILD FISH	WHD; MYXOBOLUS CEREBRALIS 2/2 BY DIGEST, HISTO CONFIRMATION 1/1
7 SALMON REGION																		
WILD	M.F. SALMON RVR; SCOUT-PISTOL	D	CUTTHROAT TROUT	98-239	7/24/98				+								WILD FISH	RS, MYXOBOLUS; ELISA 4/4(x4, LOW TO MODERATE RANGE), WHD 0/15, MYXOBOLUS SPP. 2/4 (x3-4, DIGEST- SPORES LARGE), HISTO--1 SPORE IN CONNECTIVE TISSUE; PCR NEGATIVE FOR M. CEREBRALIS; GILL HISTO--CLAM GLOCHIDIA
WILD	M.F. SALMON RVR; SHEEP CR.		CUTTHROAT TROUT	98-240	7/28/98												WILD FISH	MYXOBOLUS SPP.; WHD 0/6, MYXOBOLUS SPP. 1/1(x6--DIGEST), HISTO FOUND LARGE SPORES IN CONNECTIVE TISSUE OF 1 FISH
WILD	M.F. SALMON RVR; MARBLE CR.		CUTTHROAT TROUT	98-241	7/28/98												WILD FISH	MYXOBOLUS; MYXOBOLUS SPP. 1/1 POOLS BY DIGEST, HISTO 1/4 FISH--YOUNG SPORES IN NERVOUS TISSUE, SAMPLES 98-241 A, B, C, AND D WERE POSITIVE FOR MYXOBOLUS CEREBRALIS EXHIBITING THE DIAGNOSTIC 410 BP PCR PRODUCT.
WILD	M.F. SALMON RVR; WILSON CR.		CUTTHROAT TROUT	98-242	7/28/98												WILD FISH	MYXOBOLUS; MYXOBOLUS SPP. 1/2 POOLS BY DIGEST, HISTO 1/3 FISH--SPORES IN NERVOUS TISSUE, PCR-0/3 FOR M. CEREBRALIS

LOCATION		Class		Log #	Sample Date	Diagnoses										Exam Type
BroodYr	Stock	Species				IHN	IPN	EBS	BKD	FUR	ERM	CWD	WHD	CSH	ICH	
YOY	ALTURAS LAKE	KOKANEE		99-458	9/23/98								-			WILD FISH
WILD	RED FISH LAKE	KOKANEE		99-459	9/21/98								-			WILD FISH
ASHTON HATCHERY																
1997	HENRYS LAKE	BROOK TROUT	B	98-232	7/27/98	-	-		-	-	-	-	-			INSPECTION
1998	HAYSPUR	RAINBOW TROUT		98-233	7/27/98	-	-		-	-	-	-	-			INSPECTION
1997	HENRYS LAKE	BROOK TROUT		98-257	8/11/98	-	-		-	-	-	-	-			DIAGNOSTIC
CABINET GORGE HATCHERY																
1997	HAYSPUR	RAINBOW TROUT	A	98-031	2/25/98	-	-		-	-	-	-	-			DIAGNOSTIC
1997	PRIEST RAPIDS (WA)	FALL CHINOOK		98-032	2/25/98	-	-		+	-	-	-	-			INSPECTION
1997	WHATCOM LAKE	KOKANEE		98-159	5/12/98	-	-		-	-	-	-	-			INSPECTION
1997	SULLIVAN SPRINGS	KOKANEE		98-160	5/12/98	-	-		-	-	-	-	-			INSPECTION
1997	PRIEST RAPIDS (WA)	FALL CHINOOK		98-161	5/12/98	-	-		-	-	-	-	-			INSPECTION
BROOD	SULLIVAN SPRINGS	KOKANEE		98-425	11/23/98	-	-		+				-			INSPECTION
BROOD	CLARK FORK RIVER	KOKANEE		98-426	11/24/98	-	-		+				-			INSPECTION
CLARK FORK HATCHERY																
1994	CLARK FORK HATCHERY	WESTSLOPE CUTTHROAT TROUT	C	98-162	5/13/98	-	-		-				-			INSPECTION
1998	HAYSPUR	KAMLOOPS RBT		98-190	6/11/98	-	-					+				DIAGNOSTIC
1997	CLARK FORK HATCHERY	WESTSLOPE CUTTHROAT TROUT		98-198	6/17/98	-	-					-				DIAGNOSTIC
1998	CLARK FORK HATCHERY	WESTSLOPE CUTTHROAT TROUT		98-403	10/29/98	-	-					-				DIAGNOSTIC
1997	HAYSPUR	KAMLOOPS RBT		98-427	11/23/98	-	-					+				DIAGNOSTIC
1997	CLARK FORK HATCHERY	WESTSLOPE CUTTHROAT TROUT		98-428	11/23/98	-	-					+				DIAGNOSTIC
1998	CLARK FORK HATCHERY	CUTTHROAT TROUT		98-459	12/21/98	-	-					+				DIAGNOSTIC
CLEARWATER HATCHERY																
1996	RAPID RIVER	SPRING CHINOOK	C	98-033	2/26/98				+							INSPECTION
1996	RAPID RIVER	SPRING CHINOOK		98-034	2/26/98	-	-		+							INSPECTION

LOCATION		Class		Sample		ExamType										Diagnoses	
BroodYr	Stock	Species	Log #	Date	IHN	IPN	EBS	BKD	FUR	ERM	CWD	WHD	CSH	ICH			
1997	N. F. CLEARWATER RIVER	STEELHEAD, B GROUP	98-130	4/24/98	-	-		+				-			INSPECTION	RS, VIRO 0/20, FAT 0/20, ELISA 2/4 (x5) LOW, WHD 0/20	
BROOD	SELWAY RIVER	CHINOOK CAPTIVE	98-249	8/5/98				+							INSPECTION	BKD, ELISA 1/2 (O.D.=3.870)	
1998	N. F. CLEARWATER RIVER	STEELHEAD, B GROUP	98-251	8/5/98					-	-	-				DIAGNOSTIC	NO PATHOGENS DETECTED; BACTE 0/4	
BROOD	S. F. CLEARWATER RIVER	SPRING CHINOOK	98-316	9/2/98				+							INSPECTION	BKD, ELISA 3/4/34 (21 LOW, 13 HIGH)	
1997	HAYSPUR	RAINBOW TROUT	98-429	11/25/98	-	-			-	-	+				INSPECTION	CWD, VIRO 0/8, FLAVOBACTERIUM PSYCHROPHILUM 4/8	
1997	N. F. CLEARWATER	STEELHEAD, B GROUP	98-430	11/25/98	-	-			-	-	-				INSPECTION	NO PATHOGENS DETECTED; VIRO 0/10, BACTE 0/8	
1997	S. F. CLEARWATER RIVER	SPRING CHINOOK	98-431	11/25/98	-	-		-	-	-	-				INSPECTION	NO PATHOGENS DETECTED; VIRO 0/20, FAT 0/20, BACTE 0/8	
CROOKED RIVER SATELLITE																	
C																	
1996	S. F. CLEARWATER RIVER	SPRING CHINOOK	98-111	4/8/98	-	-		+				-			INSPECTION	RS, VIRO 0/20, FAT 0/20, ELISA 2/4 (x5) BOTH LOW, WHD 0/20	
1997	S. F. CLEARWATER RIVER	SPRING CHINOOK	98-237	7/28/98	-	-		-							INSPECTION	NO PATHOGENS DETECTED; VIRO 0/10, FAT 0/10	
1997	S. F. CLEARWATER RIVER	SPRING CHINOOK	98-345	9/17/98	-	-		+				-			INSPECTION	RS, VIRO 0/20, FAT 0/20, ELISA 4/4 (x5, O.D.=0.124, 0.142, 0.138, 0.120), WHD 0/20	
DWORSKAK NFH																	
C																	
BROOD	N. F. CLEARWATER RIVER	STEELHEAD, B GROUP	98-088	3/17/98	+	-									INSPECTION	IHNV, IHNV 11/50, IPNV 0/50	
BROOD	N. F. CLEARWATER RIVER	STEELHEAD, B GROUP	98-080	3/24/98	-	-									INSPECTION	NO PATHOGENS DETECTED; VIRO 0/50	
BROOD	N. F. CLEARWATER RIVER	STEELHEAD, B GROUP	98-091	3/31/98	+	-									INSPECTION	IHNV, IHNV 9/43, IPNV 0/43	
BROOD	N. F. CLEARWATER RIVER	STEELHEAD, B GROUP	98-108	4/7/98	-	-									INSPECTION	NO PATHOGENS DETECTED; VIRO 0/20	
EAGLE HATCHERY																	
D																	
BY95	LEMHI RIVER	CHINOOK CAPTIVE	98-002	1/7/98	-	-		+				+			DIAGNOSTIC	BKD, WHD, VIRO 0/1, FAT 1/1 TNTC, ELISA 1/1 (o.d. = 2.451), WHD 1/1 (digest only)	
ANBY96	RED FISH LAKE	SOCKEYE SALMON	98-003	1/7/98				+							DIAGNOSTIC	RS, SCOLIOSIS (CULLED); ELISA 1/1, o.d.=0.120	
ANBY96	RED FISH LAKE	SOCKEYE SALMON	98-004	1/8/98				-							DIAGNOSTIC	NO PATHOGENS DETECTED; ELISA 0/1 (o.d. = 0.084)	
BY95	LEMHI RIVER	CHINOOK CAPTIVE	98-011	1/9/98	-	-		+							DIAGNOSTIC	RS, VIRO 0/1, ELISA 1/1 (o.d. = 0.345), FAT 0/1	
BY94	RED FISH LAKE	SOCKEYE SALMON	98-035	2/27/98	-	-		-	-	-	-				DIAGNOSTIC	MAS, EXTERNAL MYCOSIS; VIRO 0/1, FAT 0/1, AEROMONAS HYDROPHILA 1/1, HISTO PENDING	
BY94	RED FISH LAKE	SOCKEYE SALMON	98-036	2/27/98	-	-		-							DIAGNOSTIC	NO PATHOGENS DETECTED; VIRO 0/1, FAT 0/1	
BY94	LEMHI RIVER	CHINOOK CAPTIVE	98-037	2/27/98	-	-		+				-			DIAGNOSTIC	RS, VIRO 0/1, ELISA 1/1 O.D.=0.169, WHD 0/1	
BY95	LEMHI RIVER	CHINOOK CAPTIVE	98-047	3/5/98	-	-		+				-			DIAGNOSTIC	RS, VIRO 0/1, FAT 0/1, ELISA 1/1 (o.d. = 0.141), WHD 0/1	
BY96	LEMHI RIVER	CHINOOK CAPTIVE	98-049	3/9/98	-	-		+			-	+			DIAGNOSTIC	WHD, VIRO 0/2, ELISA 2/2 (0.103, 0.100), FAT 0/2, BACTE 0/2, WHD 1/2 (DIGEST ONLY, HISTO PENDING)	
BY96	LEMHI RIVER	CHINOOK CAPTIVE	98-050	3/9/98	-	-		+				+			DIAGNOSTIC	WHD, RS, VIRO 0/6, ELISA 5/6 (0.110, 0.119, 0.112, 0.107, 0.120), WHD 2/6 (DIGEST ONLY, HISTO PENDING)	
BY96	W. F. YANKEE FORK	CHINOOK CAPTIVE	98-052	3/10/98	-	-		+				-			DIAGNOSTIC	BKD, VIRO 0/2, ELISA 2/2 (O.D. = 3.048, 0.103), FAT 1/2 (TNTC), WHD 0/2	

Page 4

LOCATION		Class		Sample													Diagnoses	
BroodYr	Stock	Species	Log #	Date	IHN	IPN	EBS	BKD	FUR	ERM	CWD	WHD	CSH	ICH	Exam Type	Diagnoses		
BY96	LEMHI RIVER	CHINOOK CAPTIVE	98-053	3/10/98											DIAGNOSTIC	NO PATHOGENS DETECTED, WHD 0/1		
BY96	W.F. YANKEE FORK	CHINOOK CAPTIVE	98-054	3/10/98				+							DIAGNOSTIC	BKD, ELISA 1/1 (#8, O.D.=2.875), FAT 1/1 (#8, TNTC), WHD 0/3		
BY96	W.F. YANKEE FORK	CHINOOK CAPTIVE	98-061	3/16/98	-	-		+	-						DIAGNOSTIC	BKD, VIRO 0/1, ELISA 1/1 (O.D. = 3.419), FAT 1/1 (TNTC), WHD 0/1		
BY94	LEMHI RIVER	CHINOOK CAPTIVE	98-085	4/1/98	-	-		+							DIAGNOSTIC	RS, VIRO 0/1, ELISA 1/1 (O.D.=0.110), FAT 0/1, WHD 0/1		
BY96	RED FISH LAKE	SOCKEYE SALMON	98-095	4/6/98	-	-		+							DIAGNOSTIC	BKD, VIRO 0/1, ELISA 1/1 (O.D.=0.964), FAT 0/1		
BY96	RED FISH LAKE	SOCKEYE SALMON	98-098	4/7/98	-	-		-							DIAGNOSTIC	NO PATHOGENS DETECTED, VIRO 0/1, ELISA 0/1, FAT 0/1		
BY94	LEMHI RIVER	CHINOOK CAPTIVE	98-115	4/13/98	-	-		-							DIAGNOSTIC	NO PATHOGENS DETECTED, VIRO 0/2, ELISA 0/2, FAT 0/2, WHD 0/2		
BY94	W.F. YANKEE FORK	CHINOOK CAPTIVE	98-123	4/18/98	-	-		-							DIAGNOSTIC	NO PATHOGENS DETECTED, VIRO 0/1, ELISA 0/1, FAT 0/1, WHD 0/1		
BY96	RED FISH LAKE	SOCKEYE SALMON	98-132	4/28/98	-	-		-							DIAGNOSTIC	NO PATHOGENS DETECTED, VIRO 0/1, ELISA 0/1, FAT 0/1		
BY96	W.F. YANKEE FORK	CHINOOK CAPTIVE	98-138	4/29/98	-	-		+							DIAGNOSTIC	RS, ELISA 1/1 (O.D. HIGH=3.784), FAT 1/1 TNTC, VIRO 0/1, WHD 0/1		
BY96	LEMHI RIVER	CHINOOK CAPTIVE	98-139	4/29/98	-	-		+				+			DIAGNOSTIC	RS, ELISA 1/1 (O.D. LOW=0.164), FAT 0/1, VIRO 0/1, WHD 1/1 (DIGEST ONLY)		
BY96	RED FISH LAKE	SOCKEYE SALMON	98-146	5/4/98	-	-		-							DIAGNOSTIC	NO PATHOGENS DETECTED, ELISA 0/1 (O.D. 0.094), FAT 0/1, VIRO 0/1		
ANBY96	RED FISH LAKE	SOCKEYE SALMON	98-153	5/6/98	-	-		+							DIAGNOSTIC	RS, VIRO 0/1, ELISA 1/1 (O.D.=0.135), FAT 0/1		
BY97	RED FISH LAKE	SOCKEYE SALMON	98-154	5/8/98											DIAGNOSTIC	MAS, BACTEREMIA, AEROMONAS HYDROPHILA 1/2		
BY94	EAST FORK SALMON RIVER	CHINOOK CAPTIVE	98-158	5/13/98	-	-		+							DIAGNOSTIC	RS, VIRO 0/1, FAT 0/1, ELISA 1/1 (O.D.=0.149), WHD 0/1. Mortality found immediately after tank cleaning		
BY94	W.F. YANKEE FORK	CHINOOK CAPTIVE	98-165	5/15/98	-	-		+							DIAGNOSTIC	RS, VIRO 0/1, FAT 0/1, ELISA 1/1 (O.D.=0.120), WHD 0/1. Examination did not determine cause of death.		
BY94	W.F. YANKEE FORK	CHINOOK CAPTIVE	98-168	5/15/98	-	-		+							DIAGNOSTIC	RS, VIRO 0/1, FAT 0/1, ELISA 1/1 (O.D. = 0.160), WHD 0/1. Examination did not determine cause of death.		
BY96	W.F. YANKEE FORK	CHINOOK CAPTIVE	98-169	5/17/98	-	-		+							DIAGNOSTIC	BKD, VIRO 0/1, FAT 1/1 (TNTC), ELISA 1/1 (O.D. = 3.431), WHD 0/1		
BY95	LEMHI RIVER	CHINOOK CAPTIVE	98-176	5/27/98	-	-		+							DIAGNOSTIC	RS, VIRO 0/1, FAT 0/1, ELISA 1/1 (O.D. = 0.143), WHD 0/1		
BY94	RED FISH LAKE	SOCKEYE SALMON	98-177	5/27/98											DIAGNOSTIC	THYMIC LYMPHOSARCOMA, WITH METASTASIS TO ANTERIOR AND POSTERIOR KIDNEY; HISTO		
BY94	RED FISH LAKE	SOCKEYE SALMON	98-178	5/27/98											DIAGNOSTIC	LYMPHOSARCOMA, NECROPSY ONLY		
BY96	LEMHI RIVER	CHINOOK CAPTIVE	98-179	5/30/98				+					+		DIAGNOSTIC	RS, WHD, VIRO LOST, FAT 0/1, ELISA 1/1 (O.D.=0.128), WHD 1/1 (DIGEST ONLY)		
BY95	LEMHI RIVER	CHINOOK CAPTIVE	98-180	5/30/98				+					+		DIAGNOSTIC	RS, WHD, VIRO LOST, FAT 0/1, ELISA 1/1 (O.D.=0.136), WHD 1/1 (DIGEST ONLY)		
BY96	LEMHI RIVER	CHINOOK CAPTIVE	98-184	6/3/98				+					+		DIAGNOSTIC	RS, WHD, SALMINICOLA, VIRO LOST, FAT 0/1, ELISA 1/1 (O.D.=0.105), WHD 1/1 (DIGEST ONLY)		
BY94	LEMHI RIVER.	CHINOOK CAPTIVE	98-186	6/5/98				+							DIAGNOSTIC	RS, VIRO LOST, FAT 0/1, ELISA 1/1 (O.D. = 0.140), WHD 0/1		

LOCATION		Class		Sample		Diagnoses										
BroodYr	Stock	Species	Log #	Date	IHN	IPN	EBBS	BKD	FUR	ERM	CWD	WHD	CSH	ICH	ExamType	Diagnoses
BY94	LEMHI RIVER	CHINOOK CAPTIVE	98-187	6/10/98	-	-		+				-			DIAGNOSTIC	RS, VIRO 0/1, FAT 0/1, ELISA 1/1 (O.D.=0.139), WHD 0/1
BY96	W.F. YANKEE FORK	CHINOOK CAPTIVE	98-188	6/10/98	-	-		+				-			DIAGNOSTIC	BKD, VIRO 0/1, FAT 1/1 (TNTC), ELISA 1/1 (O.D.=3.689), WHD 0/1
BY94	EAST FORK SALMON RIVER	CHINOOK CAPTIVE	98-191	6/13/98	-	-		+				-			DIAGNOSTIC	RS, VIRO 0/1, FAT 0/1, ELISA 1/1 (O.D.=0.209), WHD 0/1
BY94	EAST FORK SALMON RIVER	CHINOOK CAPTIVE	98-192	6/15/98	-	-		+				-			DIAGNOSTIC	BKD, VIRO 0/1, FAT 1/1, ELISA 0/1 (O.D.=0.096), WHD 0/1
BY96	RED FISH LAKE	SOCKEYE SALMON	98-193	6/15/98	-	-		-							DIAGNOSTIC	NO PATHOGENS DETECTED, VIRO 0/1, FAT 0/1, ELISA 0/1
BY96	RED FISH LAKE	SOCKEYE SALMON	98-194	6/16/98				+							DIAGNOSTIC	RS, FAT 0/1, ELISA 1/1 (O.D.=0.131)
BY94	LEMHI RIVER	CHINOOK CAPTIVE	98-195	6/16/98	-	-		-				-			DIAGNOSTIC	NO PATHOGENS DETECTED, VIRO 0/1, FAT 0/1, ELISA 0/1, WHD 0/1
BY94	RED FISH LAKE	SOCKEYE SALMON	98-196	5/27/98											DIAGNOSTIC	HISTO: HEPATIC TUMOR
BY96	RED FISH LAKE	SOCKEYE SALMON	98-201	6/22/98	-	-		+				-			DIAGNOSTIC	BKD, MAS, VIRO 0/1, FAT 1/1, ELISA 0/1 (O.D.=0.092), AEROMONAS HYDROPHILA 1/1
BY96	RED FISH LAKE	SOCKEYE SALMON	98-202	6/25/98	-	-		+							DIAGNOSTIC	RS, VIRO 0/1, FAT 0/1, ELISA 1/1 (O.D.=0.149)
BY94	LEMHI RIVER	CHINOOK CAPTIVE	98-203	6/25/98	-	-		-				+			DIAGNOSTIC	WHD, VIRO 0/1, FAT 0/1, ELISA 0/1 (O.D.=0.119), MYXOBOLUS CEREBRALIS 1/1 (DIGEST ONLY)
BY95	LEMHI RIVER	CHINOOK CAPTIVE	98-204	6/26/98	-	-		+				+			DIAGNOSTIC	RS, WHD, VIRO 0/1, FAT 0/1, ELISA 1/1 (O.D.=0.119), MYXOBOLUS CEREBRALIS 1/1 (DIGEST ONLY)
FY96	W.F. YANKEE FORK	CHINOOK CAPTIVE	98-205	6/25/98	-	-		+				-			DIAGNOSTIC	BKD, VIRO 0/1, FAT 1/1 (TNTC), ELISA 1/1 (O.D.=3.964), WHD 0/1
FY96	W.F. YANKEE FORK	CHINOOK CAPTIVE	98-206	6/29/98	-	-		+				-			DIAGNOSTIC	BKD, VIRO 0/1, FAT 1/1 (TNTC), ELISA 1/1 (O.D.=3.769), WHD 0/1
FY96	W.F. YANKEE FORK	CHINOOK CAPTIVE	98-207	7/1/98	-	-		+				-			DIAGNOSTIC	BKD, VIRO 0/1, FAT 1/1 (TNTC), ELISA 1/1 (O.D.=2.698), WHD 0/1
BY94	LEMHI RIVER	CHINOOK CAPTIVE	98-209	7/2/98	-	-		+				-			DIAGNOSTIC	RS, VIRO 0/1, FAT 0/1, ELISA 1/1 (O.D.=0.125), WHD 0/1
BY96	W.F. YANKEE FORK	CHINOOK CAPTIVE	98-211	7/4/98	-	-		+				-			DIAGNOSTIC	BKD, VIRO 0/1, FAT 1/1 (TNTC), ELISA 1/1 (O.D.=3.032), WHD 0/1
BY96	W.F. YANKEE FORK	CHINOOK CAPTIVE	98-212	7/4/98	-	-		+				-			DIAGNOSTIC	BKD, VIRO 0/1, FAT 1/1 (TNTC), ELISA 1/1 (O.D.=3.169), WHD 0/1
BY96	W.F. YANKEE FORK	CHINOOK CAPTIVE	98-213	7/8/98	-	-		+				-			DIAGNOSTIC	BKD, VIRO 0/1, FAT 1/1 (TNTC), ELISA 1/1 (3.991), WHD 0/1
BY96	RED FISH LAKE	SOCKEYE SALMON	98-214	7/10/98				+							DIAGNOSTIC	RS, ELISA 1/1 (O.D.=0.130), FAT 0/1
BY96	LEMHI RIVER	CHINOOK CAPTIVE	98-215	7/12/98	-	-		+				-			DIAGNOSTIC	SALMONCOLA, RS, VIRO 0/1, FAT 0/1, ELISA 1/1 (O.D.=0.138), WHD 0/1
BY96	W.F. YANKEE FORK	CHINOOK CAPTIVE	98-216	7/14/98	-	-		+				-			DIAGNOSTIC	BKD, VIRO 0/1, ELISA 1/1 (O.D.=3.774), FAT 1/1 (TNTC), WHD 0/1
BY96	W.F. YANKEE FORK	CHINOOK CAPTIVE	98-217	7/15/98	-	-		+				-			DIAGNOSTIC	BKD, VIRO 0/1, ELISA 1/1(O.D.=3.738), FAT 1/1 (TNTC), WHD 0/1
BY96	W.F. YANKEE FORK	CHINOOK CAPTIVE	98-218	7/17/98	-	-		+				-			DIAGNOSTIC	BKD, VIRO 0/1, ELISA 1/1(O.D.=4.134), FAT 1/1 (TNTC), WHD 0/1
BY96	RED FISH LAKE	SOCKEYE SALMON	98-219	7/17/98				+							DIAGNOSTIC	RS, ELISA 1/1 (O.D.=0.142), FAT 0/1
BY94	W.F. YANKEE FORK	CHINOOK CAPTIVE	98-220	7/18/98	-	-		+				-			DIAGNOSTIC	RS, ELISA 1/1(O.D.=0.107), FAT 0/1, VIRO 0/1, WHD 0/1
BY96	W.F. YANKEE FORK	CHINOOK CAPTIVE	98-222	7/22/98	-	-		+				-			DIAGNOSTIC	RS, ELISA 1/1(O.D.=2.830), FAT 1/1 (TNTC), VIRO 0/1, WHD 0/1
BY96	RED FISH LAKE	SOCKEYE SALMON	98-223	7/24/98	-	-		+							DIAGNOSTIC	RS, NO CLINICAL SIGNS, ELISA 1/1 POOL OF 5 FISH (O.D.=0.125), FAT 0/1, VIRO 0/5

LOCATION			Class		Sample		Diagnoses									
BroodYr	Stock	Species	Log #	Date	INH	IPN	EIBS	BKD	FUR	ERM	CWD	WHD	CSH	ICH	ExamType	Diagnoses
BY96	RED FISH LAKE	SOCKEYE SALMON	98-224	7/24/98	-	-	-	-	-	-	-	-	-	-	DIAGNOSTIC	NO PATHOGENS DETECTED, ELISA 0/5, FAT 0/5, VIRO 0/5
BY96	RED FISH LAKE	SOCKEYE SALMON	98-225	7/24/98	-	-	-	+	-	-	-	-	-	-	DIAGNOSTIC	RS, NO CLINICAL SIGNS, ELISA 1/1 POOL OF FISH (O.D.=0.122), FAT 0/5, VIRO 0/5
BY94	EAST FORK SALMON RIVER	CHINOOK CAPTIVE	98-226	7/27/98	-	-	-	-	-	-	-	-	-	-	DIAGNOSTIC	NO PATHOGENS DETECTED, ELISA 0/1, FAT 0/1, VIRO 0/1, WHD 0/1
BY96	W.F. YANKEE FORK	CHINOOK CAPTIVE	98-228	7/28/98	+	+	-	+	-	-	-	-	-	-	DIAGNOSTIC	RS, ELISA 1/1 (O.D.=3.046), FAT 1/1 (TNTC), VIRO 0/1, WHD 0/1
BY94	EAST FORK SALMON RIVER	CHINOOK CAPTIVE	98-229	7/28/98	-	-	-	+	-	-	-	+	-	-	DIAGNOSTIC	RS, NO CLINICAL SIGNS, ELISA 1/1 (O.D.=0.117), FAT 0/1, VIRO 0/1, MYXOBOLUS CEREBRALIS 1/1 DIGEST ONLY (PREVIOUSLY CONFIRMED IN STOCK)
BY95	LEMHI RIVER	CHINOOK CAPTIVE	98-244	8/1/98	-	-	-	+	-	-	-	-	-	-	DIAGNOSTIC	RS, NO CLINICAL SIGNS, ELISA 1/1 (O.D.=0.119), FAT 0/1, VIRO 0/1, WHD 0/1
BY96	RED FISH LAKE	SOCKEYE SALMON	98-245	8/1/98	-	-	-	+	-	-	-	-	-	-	DIAGNOSTIC	RS, ELISA 1/1 (O.D.=0.108), FAT 0/1, VIRO 0/1
BY96	LEMHI RIVER	CHINOOK CAPTIVE	98-248	8/6/98	-	-	-	+	-	-	-	-	-	-	DIAGNOSTIC	BKD, VIRO 0/1, ELISA 1/1 (O.D.=3.001), FAT 1/1, RENIBACTERIUM SALMONINARUM CULTURED ON SKDM2 AND FAT CONFIRMATION OF BACTERIA CULTURE
BY94	EAST FORK SALMON RIVER	CHINOOK CAPTIVE	98-253	8/10/98	-	-	-	-	-	-	-	-	-	-	DIAGNOSTIC	NO PATHOGENS DETECTED, ELISA 0/1, FAT 0/1, VIRO 0/1, WHD 0/1
BY96	W.F. YANKEE FORK	CHINOOK CAPTIVE	98-254	8/10/98	-	-	-	+	-	-	-	-	-	-	DIAGNOSTIC	BKD, VIRO 0/1, FAT 1/1 (TNTC), ELISA 1/1 (O.D.=3.693), WHD 0/1
BY94	LEMHI RIVER	CHINOOK CAPTIVE	98-255	8/7/98	-	-	-	+	-	-	-	+	-	-	DIAGNOSTIC	RS, WHD, VIRO 0/1, FAT 0/1, ELISA 1/1 (O.D.=0.115), WHD 1/1 (DIGEST ONLY)
BY96	RED FISH LAKE	SOCKEYE SALMON	98-258	8/11/98	-	-	-	+	-	-	-	-	-	-	DIAGNOSTIC	RS 1/1 ELISA (O.D.=0.123; 1/1 FAT; VIRO 0/1
BY96	RED FISH LAKE	SOCKEYE SALMON	98-259	8/11/98	-	-	-	+	-	-	-	-	-	-	DIAGNOSTIC	RS, VIRO 0/1, FAT 0/1, ELISA 1/1 (O.D.=0.121)
BY96	W.F. YANKEE FORK	CHINOOK CAPTIVE	98-262	8/12/98	-	-	-	+	-	-	-	-	-	-	DIAGNOSTIC	RS, VIRO 0/1, ELISA 1/1 (O.D.=3.516), FAT 1/1 (TNTC), WHD 0/1
BY96	RED FISH LAKE	SOCKEYE SALMON	98-266	8/13/98	-	-	-	-	-	-	-	-	-	-	DIAGNOSTIC	NO PATHOGENS DETECTED, VIRO 0/1, FAT 0/1, ELISA 0/1 (O.D.=0.081)
BY96	RED FISH LAKE	SOCKEYE SALMON	98-267	8/13/98	-	-	-	-	-	-	-	-	-	-	DIAGNOSTIC	NO PATHOGENS DETECTED, VIRO 0/1, FAT 0/1, ELISA 0/1 (O.D.=0.094)
BY94	LEMHI RIVER	CHINOOK CAPTIVE	98-268	8/14/98	-	-	-	+	-	-	-	+	-	-	DIAGNOSTIC	RS, WHD, VIRO 0/1, FAT 0/1, ELISA 1/1 (O.D.=0.191), WHD 1/1 (DIGEST ONLY)
BY96	W.F. YANKEE FORK	CHINOOK CAPTIVE	98-270	8/16/98	-	-	-	+	-	-	-	-	-	-	DIAGNOSTIC	BKD, VIRO 0/1, ELISA 1/1 (O.D.=3.672), FAT 1/1 (TNTC), WHD 0/1
ANBY96	RED FISH LAKE	SOCKEYE SALMON	98-272	8/18/98	-	-	-	+	-	-	-	-	-	-	DIAGNOSTIC	RS, VIRO 0/1, ELISA 1/1 (O.D.=0.151), FAT 0/1
BY96	LEMHI RIVER	CHINOOK CAPTIVE	98-287	8/25/98	-	-	-	-	-	-	-	-	-	-	DIAGNOSTIC	NO PATHOGENS DETECTED, VIRO 0/1, FAT 0/1, ELISA 0/1 (O.D.=0.089), WHD 0/1
BY96	W.F. YANKEE FORK	CHINOOK CAPTIVE	98-296	8/28/98	-	-	-	+	-	-	-	-	-	-	DIAGNOSTIC	BKD, VIRO 0/1, FAT 1/1 (TNTC), ELISA 1/1 (O.D.=2.514), WHD 0/1
BY96	LEMHI RIVER	CHINOOK CAPTIVE	98-299	8/28/98	-	-	-	-	-	-	-	-	-	-	DIAGNOSTIC	SALMINCOLA, VIRO 0/1, FAT 0/1, ELISA 0/1 (O.D.=0.097), WHD 0/1, SALMINCOLA CALIFORMIENSIS
BY94	LEMHI RIVER	CHINOOK CAPTIVE	98-303	8/29/98	-	-	-	-	-	-	-	-	-	-	DIAGNOSTIC	NO PATHOGENS DETECTED, VIRO 0/1, FAT 0/1, ELISA 0/1 (O.D.=0.094)
BY96	RED FISH LAKE	SOCKEYE SALMON	98-306	9/1/98	-	-	-	-	-	-	-	-	-	-	DIAGNOSTIC	NO PATHOGENS DETECTED, VIRO 0/1, FAT 0/1, ELISA 0/1 (O.D.=0.094)

LOCATION			Class		Sample										Diagnoses									
BroodYr	Stock	Species	Log #	Date	IRH	IPN	EBIS	BYD	FUR	ERM	CWD	WHD	CSH	ICH	ExamType									
BY96	W.F. YANKEE FORK	CHINOOK CAPTIVE	98-313	9/3/98	-	-	-	+	-	-	-	-	-	-	DIAGNOSTIC	BKO; VIRO 01, FAT 1/1 (TNTC), ELISA 1/1 (O.D.=2.911), WHD 0/1								
BY96	LEMHI RIVER	CHINOOK CAPTIVE	98-319	9/4/98	-	-	-	-	-	-	-	+	-	-	DIAGNOSTIC	WHD, SALMINCOLA; VIRO 01, FAT 0/1, ELISA 0/1 (O.D.=0.084), WHD 1/1 (DIGEST ONLY), SALMINCOLA CALIFORNIENSIS 1/1								
BY96	LEMHI RIVER	CHINOOK CAPTIVE	98-323	9/6/98	-	-	-	+	-	-	-	-	-	-	DIAGNOSTIC	RS, SALMINCOLA; VIRO 01, FAT 0/1, ELISA 1/1 (O.D.=0.106), WHD 0/1, SALMINCOLA CALIFORNIENSIS 1/1								
BY96	LEMHI RIVER	CHINOOK CAPTIVE	98-324	9/6/98	-	-	-	-	-	-	-	+	-	-	DIAGNOSTIC	WHD, SALMINCOLA; VIRO 01, FAT 0/1, ELISA 0/1 (O.D. = 0.092), WHD 1/1 (DIGEST ONLY), SALMINCOLA CALIFORNIENSIS 1/1								
BY96	LEMHI RIVER	CHINOOK CAPTIVE	98-325	9/7/98	-	-	-	-	-	-	-	-	-	-	DIAGNOSTIC	SALMINCOLA; VIRO 01, ELISA 0/1 (O.D.=0.083), FAT 0/1, WHD 0/1, SALMINCOLA CALIFORNIENSIS 1/1								
BY94	LEMHI RIVER	CHINOOK CAPTIVE	98-326	9/7/98	-	-	-	+	-	-	-	+	-	-	DIAGNOSTIC	RS; VIRO 01, ELISA 1/1 (O.D.=0.124), WHD 1/1 (DIGEST ONLY)								
ANBY97	RED FISH LAKE	SOCKEYE SALMON	98-329	9/9/98	-	-	-	-	-	-	-	-	-	-	DIAGNOSTIC	NO PATHOGENS DETECTED; VIRO 0/1, FAT 0/1, ELISA 0/1 (O.D.=0.076)								
BY96	RED FISH LAKE	SOCKEYE SALMON	98-334	9/11/98	-	-	-	-	-	-	-	-	-	-	DIAGNOSTIC	NO PATHOGENS DETECTED; VIRO 0/1, FAT 0/1, ELISA 0/1 (O.D.=0.081)								
BY94	E.F. YANKEE FORK RIVER	CHINOOK CAPTIVE SPAWNER	98-337	9/15/98	-	-	-	+	-	-	-	-	-	-	INSPECTION	RS; ELISA 1/1 (O.D.=0.119), WHD 0/1								
BY94	LEMHI RIVER	CHINOOK CAPTIVE SPAWNER	98-338	9/16/98	-	-	-	+	-	-	-	-	-	-	INSPECTION	RS; VIRO 04, ELISA 1/4 (NO TAG #2, O.D.=0.107), WHD 0/4								
BY96	RED FISH LAKE	SOCKEYE SALMON	98-343	9/17/98	-	-	-	+	-	-	-	-	-	-	DIAGNOSTIC	RS; VIRO 01, FAT 0/1, ELISA 1/1 (O.D.=0.116)								
BY94	LEMHI RIVER	CHINOOK CAPTIVE	98-347	9/18/98	-	-	-	+	-	-	-	+	-	-	DIAGNOSTIC	RS; VIRO 01, ELISA 1/1 (LOW O.D. 0.138), WHD 1/1								
BY94	W.F. YANKEE FORK	CHINOOK CAPTIVE SPAWNER	98-348	9/18/98	-	-	-	+	-	-	-	-	-	-	DIAGNOSTIC	RS; VIRO 02, ELISA 2/2 (O.D.s: EOD-0.244, A38-0.129), WHD 0/2								
BY94	EAST FORK SALMON RIVER	CHINOOK CAPTIVE SPAWNER	98-349	9/21/98	-	-	-	+	-	-	-	-	-	-	DIAGNOSTIC	RS; VIRO 06, ELISA 4/5 (O.D.s: 497F-0.104, 0156-0.190, 6372-0.110, 7F63-0.124), WHD 0/5								
BY94	W.F. YANKEE FORK	CHINOOK CAPTIVE	98-350	9/19/98	-	-	-	-	-	-	-	-	-	-	DIAGNOSTIC	NO PATHOGENS DETECTED; WHD 0/1								
BY94	LEMHI RIVER	CHINOOK CAPTIVE SPAWNER	98-352	9/22/98	-	-	-	+	-	-	-	-	-	-	INSPECTION	RS; VIRO 03, ELISA 3/3 (O.D.s: 32A-0.239, 82B-0.106, F7B-0.152), WHD 0/3								
BY94	W.F. YANKEE FORK	CHINOOK CAPTIVE SPAWNER	98-353	9/22/98	-	-	-	-	-	-	-	-	-	-	INSPECTION	NO PATHOGENS DETECTED; VIRO 0/1, ELISA 0/1 (O.D.=0.099), WHD 0/1								
BY94	EAST FORK SALMON RIVER	CHINOOK CAPTIVE	98-354A	9/22/98	-	-	-	+	-	-	-	-	-	-	INSPECTION	RS; VIRO 06, ELISA 6/6 (OD'S: #60-0.246, #F6B-0.185, #36A-0.186, #40F-0.180, #C10-0.168, #65B-0.162), WHD 0/6								
BROOD	EAST FORK SALMON RIVER	CHINOOK CAPTIVE SPAWNER	98-354B	9/23/98	-	-	-	+	-	-	-	-	-	-	INSPECTION	RS; VIRO 04, ELISA 4/4 (O.D.s: #F78-0.100, #F6F-0.117, #B6C-0.121, #C41-0.111), WHD 0/4								
BY94	EAST FORK SALMON RIVER	CHINOOK CAPTIVE SPAWNER	98-356	9/24/98	-	-	-	+	-	-	-	-	-	-	INSPECTION	RS; VIRO 05, ELISA 4/5 (O.D.s: 775D-0.096, 114D-0.161, D16-0.170, 154A-0.156, NO TAG-0.188), WHD 0/5								
BY96	RED FISH LAKE	SOCKEYE SALMON	98-357	9/25/98	-	-	-	-	-	-	-	-	-	-	DIAGNOSTIC	NO PATHOGENS DETECTED; VIRO 0/1, FAT 0/1, ELISA 0/1								
BY96	LEMHI RIVER	CHINOOK CAPTIVE	98-358	9/26/98	-	-	-	-	-	-	-	-	-	-	DIAGNOSTIC	NO PATHOGENS DETECTED; VIRO 0/1, FAT 0/1, ELISA 0/1 (O.D.=0.095), WHD 0/1								
BY95	LEMHI RIVER	CHINOOK CAPTIVE SPAWNER	98-364	9/28/98	-	-	-	+	-	-	-	-	-	-	DIAGNOSTIC	RS; VIRO 01, FAT 0/1, ELISA 1/1 (O.D.=0.131), WHD 0/1								

LOCATION			Class		Log #	Sample Date	Diagnoses										ExamType	Diagnoses
BroodYr	Stock	Species	IHN	IPN			EBS	BKD	FUR	ERM	CND	WHD	CSH	ICH				
BY94	EAST FORK SALMON RIVER	CHINOOK CAPTIVE SPAWNER	98-365	9/29/98	-	-	-	+	-	-	-	-	-	-	INSPECTION	RS, VIRO 03, ELISA 33 (O.D.s: 2168-0.215, 0E38-0.104, 283C-0.314), WHD 03		
BY94	EAST FORK SALMON RIVER	CHINOOK CAPTIVE SPAWNER	98-366	9/30/98	-	-	-	+	-	-	-	-	-	-	INSPECTION	RS, VIRO 05, ELISA 15 (O.D.=0.391-#5F23), WHD 03		
BY94	W.F. YANKEE FORK	CHINOOK CAPTIVE	98-367	9/30/98	-	-	-	+	-	-	-	-	-	-	INSPECTION	RS, VIRO 03, ELISA 23 (O.D.: #364D=0.109, #215F=0.143), WHD 03		
BY95	LEMHI RIVER	CHINOOK CAPTIVE SPAWNER	98-368	9/30/98	-	-	-	+	-	-	-	+	-	-	INSPECTION	RS, WHD; VIRO 07, ELISA 57(OD= #057 (0.130), #07C (0.102), #078 (0.141), #06B (0.116), AND #A63 (0.146)), WHD 27 (DIGEST ONLY)		
BY96	LEMHI RIVER	CHINOOK CAPTIVE SPAWNER	98-369	9/30/98	-	-	-	+	-	-	-	-	-	-	INSPECTION	RS, VIRO 01, ELISA 1/1 (O.D.=0.113)		
BY96	LEMHI RIVER	CHINOOK CAPTIVE	98-374	10/7/98	-	-	-	-	-	-	-	+	-	-	DIAGNOSTIC	WHD; VIRO 01, FAT 0/1, ELISA 0/1 (O.D.=0.096), WHD 1/1		
BY96	RED FISH LAKE	SOCKEYE SPAWNER	98-379	10/9/98	-	-	-	+	-	-	-	-	-	-	INSPECTION	RS, VIRO 0/11, ELISA 11/11-O.D.'S=0.104, 0.104, 0.105, 0.105, 0.108, 0.112, 0.113, 0.114, 0.127, 0.143-PIT TAG #22170E0ED, 0.158-PIT TAG #22171E023D, AND 0.192- PIT TAG #416D-433819		
BY94	RED FISH LAKE	SOCKEYE SPAWNER	98-380	10/9/98	-	-	-	+	-	-	-	-	-	-	INSPECTION	RS, VIRO 01, ELISA 1/1 (O.D.=0.104)		
BY96	RED FISH LAKE	SOCKEYE SPAWNER	98-388	10/16/98	-	-	-	+	-	-	-	-	-	-	INSPECTION	RS, VIRO 03, ELISA 23 (O.D.s: 590B=0.100, 5853=0.155, 7947=0.098)		
BY94	RED FISH LAKE	SOCKEYE SPAWNER	98-389	10/19/98	-	-	-	-	-	-	-	-	-	-	INSPECTION	NO PATHOGENS DETECTED; VIRO 0/1, ELISA 0/1(O.D.=0.077)		
BY94	RED FISH LAKE	SOCKEYE SPAWNER	98-390	10/19/98	-	-	-	-	-	-	-	-	-	-	INSPECTION	NO PATHOGENS DETECTED; VIRO 0/1, ELISA 0/1 (O.D.=0.074)		
BY96	RED FISH LAKE	SOCKEYE SPAWNER	98-391	10/20/98	-	-	-	+	-	-	-	-	-	-	INSPECTION	RS, VIRO 0/8, ELISA 6/8 (O.D.s: 536C=0.102, 1410=0.156, 1076=0.117, 020E=0.085, 4102=0.148, 0619=0.153, 6416=0.085, 4334=0.127)		
BY94	RED FISH LAKE	SOCKEYE SALMON	98-392	10/21/98	-	-	-	-	-	-	-	-	-	-	DIAGNOSTIC	NO PATHOGENS DETECTED; VIRO 0/1, ELISA 0/1 (O.D.=0.089)		
BY96	RED FISH LAKE	SOCKEYE SPAWNER	98-393	10/22/98	-	-	-	+	-	-	-	-	-	-	INSPECTION	RS, ELISA 2/4 (#416D7E2970 O.D.=0.259, #416D1F123E O.D.=0.114 AT 1:8 DILUTION), VIRO 0/4		
BY94	RED FISH LAKE	SOCKEYE SPAWNER	98-394	10/26/98	-	-	-	-	-	-	-	-	-	-	INSPECTION	NO PATHOGENS DETECTED; VIRO 0/1, ELISA 0/1		
BY96	RED FISH LAKE	SOCKEYE SPAWNER	98-395	10/26/98	-	-	-	-	-	-	-	-	-	-	INSPECTION	NO PATHOGENS DETECTED; VIRO 0/1, ELISA 0/1		
BY94	RED FISH LAKE	SOCKEYE SPAWNER	98-396	10/27/98	-	-	-	+	-	-	-	-	-	-	DIAGNOSTIC	RS, VIRO 0/18, ELISA 3/18 (+O.D.s: #579=0.102, #136=0.102, AND #46E=0.111)		
BY94	RED FISH LAKE	SOCKEYE SPAWNER	98-398	10/29/98	-	-	-	-	-	-	-	-	-	-	INSPECTION	NO PATHOGENS DETECTED; VIRO 0/8, ELISA 0/8		
BY96	RED FISH LAKE	SOCKEYE SPAWNER	98-399	10/29/98	-	-	-	+	-	-	-	-	-	-	INSPECTION	RS, VIRO 0/3, ELISA 1/3 (LOW O.D.=0.107)		
BY96	RED FISH LAKE	SOCKEYE SPAWNER	98-404	11/2/98	-	-	-	+	-	-	-	-	-	-	INSPECTION	ELISA 1/6 (O.D.s: 4E34=0.076, 5816=0.080, 4A0E=0.090, 5366=0.094, 2609=0.087, 4B0C=0.120)		
BY94	RED FISH LAKE	SOCKEYE SPAWNER	98-405	11/2/98	-	-	-	-	-	-	-	-	-	-	INSPECTION	NO PATHOGENS DETECTED; VIRO 0/1, ELISA 0/1 (O.D.=0.076), WHD 0/1		
BY94	RED FISH LAKE	SOCKEYE SPAWNER	98-406	11/2/98	-	-	-	-	-	-	-	-	-	-	INSPECTION	NO PATHOGENS DETECTED; VIRO 0/1 ELISA 0/1 (O.D.=0.076)		
BY96	W.F. YANKEE FORK	CHINOOK CAPTIVE	98-408	11/6/98	-	-	-	+	-	-	-	-	-	-	DIAGNOSTIC	BKD; VIRO 0/1, FAT 1/1 (TNTC), ELISA 1/1 (O.D.=3.107), WHD 0/1		
BY96	W.F. YANKEE FORK	CHINOOK CAPTIVE	98-409	11/6/98	-	-	-	+	-	-	-	-	-	-	DIAGNOSTIC	BKD; VIRO 0/1, FAT 1/1, ELISA 1/4 (O.D.=1.398), WHD 0/1		

LOCATION		Class		Sample		Diagnoses									
BroodYr	Stock	Species	Log #	Date	INN	IPN	EIBS	BKD	FUR	ERM	CHD	WHD	CSH	ICH	ExamType
BY96	W.F. YANKEE FORK	CHINOOK CAPTIVE	98-410	11/9/98	-	-	-	+	-	-	-	+	-	-	INSPECTION
BKD, WHD, VIRO 0/1, ELISA 1/1 (O.D.=2.751), WHD 1/1 (DIGEST ONLY)															
BY96	LEMHI RIVER	CHINOOK CAPTIVE	98-411	11/9/98	-	-	-	-	-	-	-	-	-	-	INSPECTION
NO PATHOGENS DETECTED, HANDLING STRESS; VIRO 0/1, ELISA 0/1 (O.D.=0.088), WHD 0/1															
BY96	LEMHI RIVER	CHINOOK CAPTIVE	98-412	11/10/98	-	-	-	-	-	-	-	-	-	-	DIAGNOSTIC
NO PATHOGENS DETECTED, HANDLING STRESS; VIRO 0/1, ELISA 0/1 (O.D.=0.081), WHD 0/1															
BY97	W.F. YANKEE FORK	CHINOOK CAPTIVE	98-424	11/25/98	-	-	-	-	-	-	-	-	-	-	DIAGNOSTIC
NO PATHOGENS DETECTED; VIRO 0/1, FAT 0/1, ELISA 0/1 (O.D.=0.069), WHD 0/1															
BY97	LEMHI RIVER	CHINOOK CAPTIVE	98-432	11/27/98	-	-	-	-	-	-	-	+	-	-	DIAGNOSTIC
WHD, VIRO 0/1, FAT 0/1, ELISA 0/1 (O.D.=0.081), WHD 1/1 (DIGEST ONLY)															
BY97	LEMHI RIVER	CHINOOK CAPTIVE	98-433	11/28/98	-	-	-	-	-	-	-	+	-	-	DIAGNOSTIC
WHD, VIRO 0/2, FAT 0/2, WHD 1/2 (DIGEST ONLY)															
BY95	LEMHI RIVER	CHINOOK CAPTIVE	98-435	11/30/98	-	-	-	+	-	-	-	-	-	-	DIAGNOSTIC
RS, MYXOBOLUS, HANDLING STRESS/SALMONICOLA REMOVAL; VIRO 0/3, FAT 0/3, ELISA 3/3 (O.D.=0.157, 0.044=0.205, 3.808=0.255) WHD 0/3, MYXOBOLUS 1/3 (DIGEST ONLY, SPORE LARGE)															
BY97	LEMHI RIVER	CHINOOK CAPTIVE	98-438	12/8/98	-	-	-	-	-	-	-	+	-	-	DIAGNOSTIC
SALMONICOLA: VIRO 0/1, FAT 0/1, WHD 0/1, SALMONICOLA CALIFORNIENSIS 1/1															
BY96	RED FISH LAKE	SOCKEYE SALMON	98-442	12/9/98	-	-	-	-	-	-	-	-	-	-	DIAGNOSTIC
NO PATHOGENS DETECTED; VIRO 0/1, FAT 0/1, ELISA 0/1 (O.D.=0.095), WHD 0/1															
BY97	LEMHI RIVER	CHINOOK CAPTIVE	98-449	12/11/98	-	-	-	+	-	-	-	+	-	-	DIAGNOSTIC
WHD, RS, VIRO 0/1, FAT 0/1, ELISA 1/1 (O.D.=0.101), WHD 1/1 (DIGEST ONLY)															
BY96	LEMHI RIVER	CHINOOK CAPTIVE	98-453	12/17/98	-	-	-	-	-	-	-	+	-	-	DIAGNOSTIC
WHD, VIRO 0/1, ELISA 0/1 (O.D.=0.092), WHD 1/1 (DIGEST ONLY)															
BY96	RED FISH LAKE	SOCKEYE SALMON	98-454	12/18/98	-	-	-	+	-	-	-	-	-	-	DIAGNOSTIC
RS, VIRO 0/1, ELISA 1/1 (O.D.=0.101)															
1997	LEMHI RIVER	CHINOOK CAPTIVE	98-458	11/22/98	-	-	-	+	-	-	-	+	-	-	DIAGNOSTIC
RS, WHD, VIRO 0/1, FAT 0/1, ELISA 1/1 (O.D.=0.109), WHD 1/1 (DIGEST ONLY)															
BY97	LEMHI RIVER	CHINOOK CAPTIVE	98-462	12/24/98	-	-	-	+	-	-	-	+	-	-	DIAGNOSTIC
RS, WHD, VIRO 0/1, FAT 0/1, ELISA 1/1 (O.D.=0.113), WHD 1/1 (DIGEST ONLY)															
BY96	RED FISH LAKE	SOCKEYE SALMON	98-463	12/26/98	-	-	-	+	-	-	-	-	-	-	DIAGNOSTIC
RS, VIRO 0/1, ELISA 1/1 (O.D.=0.115)															
BY96	RED FISH LAKE	SOCKEYE SALMON	98-464	12/26/98	-	-	-	+	-	-	-	-	-	-	DIAGNOSTIC
RS, VIRO 0/1, ELISA 1/1 (O.D.=0.128)															
BY96	W.F. YANKEE FORK	CHINOOK CAPTIVE	98-465	12/28/98	-	-	-	+	-	-	-	-	-	-	DIAGNOSTIC
BKD, GRAM NEGATIVE BACTERIAL SEPTICEMIA; VIRO 0/1, FAT 1/1 (TNTC), ELISA 1/1 (O.D.=2.667)															
BY96	RED FISH LAKE	SOCKEYE SALMON	98-466	12/29/98	-	-	-	+	-	-	-	-	-	-	DIAGNOSTIC
RS, VIRO 0/1, FAT 0/1, ELISA 1/1 (O.D.=0.101)															
EAGLE WET LAB															
D															
1996	RAPID RIVER-HBKD	SPRING CHINOOK	98-084	3/27/98	-	-	-	+	-	-	-	-	-	-	DIAGNOSTIC
BKD, FAT 2/2 (AZITHRO STUDY--TANKS 1 & 3)															
1996	RAPID RIVER-HBKD	SPRING CHINOOK	98-086	4/1/98	-	-	-	+	-	-	-	-	-	-	RESEARCH
BKD, FAT 1/1 (AZITHRO STUDY--TANK 2)															
1996	RAPID RIVER-HBKD	SPRING CHINOOK	98-093	4/3/98	-	-	-	+	-	-	-	-	-	-	RESEARCH
BKD, FAT 1/1 (AZITHRO STUDY--TANK UNKNOWN)															
1996	RAPID RIVER-HBKD	SPRING CHINOOK	98-097	4/7/98	-	-	-	-	-	-	-	-	-	-	RESEARCH
NO PATHOGENS DETECTED; FAT 0/1 (AZITHRO STUDY--TANK 2)															
1996	RAPID RIVER-HBKD	SPRING CHINOOK	98-114	4/11/98	-	-	-	-	-	-	-	-	-	-	RESEARCH
NO PATHOGENS DETECTED; FAT 0/2 (AZITHRO STUDY--TANK 2)															

LOCATION		Class	Log #	Sample Date	Diagnoses										ExamType	Diagnoses
BroodYr	Stock				Species	IHN	IPN	EIBS	BKD	FUR	ERM	CWD	WHD	CSH		
1996	RAPID RIVER-HBKD	SPRING CHINOOK	98-117	4/14/98				-							RESEARCH	NO PATHOGENS DETECTED; FAT 0/1 (AZITHRO STUDY-TANK 1)
1996	RAPID RIVER-HBKD	SPRING CHINOOK	98-124	4/21/98				-							RESEARCH	NO PATHOGENS DETECTED; FAT 0/1 (AZITHRO STUDY-TANK 1)
1996	RAPID RIVER-HBKD	SPRING CHINOOK	98-129	4/23/98				+							RESEARCH	BKD; FAT 1/1 TINTC (AZITHRO STUDY-TANK 2-AZ1)
1996	RAPID RIVER-HBKD	SPRING CHINOOK	98-147	5/5/98				+							RESEARCH	BKD; FAT 1/1 TINTC (AZITHRO STUDY-TANK 3)
MIXED	HAYSPUR	RAINBOW TROUT	98-183	6/1/98									-		RESEARCH	NO PATHOGENS DETECTED; WHD 0/24 (EAGLE SETTLING POND SENTINALS)
1998	HAYSPUR	KAMLOOPS RBT	98-263A	8/12/98									+		RESEARCH	WHD 33 POOLS (2x3 and 1x4)
1998	HAYSPUR	KAMLOOPS RBT	98-263B	8/31/98									+		RESEARCH	WHD; MYXOBOLUS CEREBRALIS 7/12 (WHOLE HEADS FOR ENUMERATION)
1998	HAYSPUR	KAMLOOPS RBT	98-359	9/26/98									+		RESEARCH	WHD; MYXOBOLUS CEREBRALIS 20/20 (DIGEST), HISTO 1/2, MC-PCR 2/2
MIXED	HAYSPUR	RAINBOW TROUT	98-370	9/30/98									-		RESEARCH	NO PATHOGENS DETECTED; WHD 0/31
1998	COLORADO RIVER	RAINBOW TROUT	98-397	10/27/98									+		RESEARCH	WHD; MYXOBOLUS CEREBRALIS 19/20
1998	HAYSPUR	KAMLOOPS RBT	98-434	11/30/98									+		RESEARCH	WHD; MYXOBOLUS CEREBRALIS 20/20 (DIGEST ONLY)
1998	TROUT LODGE	KAMLOOPS RBT	99-008	12/31/98									+		RESEARCH	WHD; MYXOBOLUS CEREBRALIS 1/2 BY HISTO.
GRACE HATCHERY																
1998	HAYSPUR	RAINBOW TROUT	98-073	3/23/98	-	-					-				DIAGNOSTIC	BACTEREMIA; VIRO 0/5, SHEWANELLA PUTREFACIENS 4/4
1997	SARATOGA	LAKE TROUT	98-074	3/23/98	-	-					-				INSPECTION	NO PATHOGENS DETECTED; VIRO 0/20, FAT 0/12, BACTE 0/8
1997	HAYSPUR	RAINBOW TROUT	98-075	3/24/98	-	-					-		+		INSPECTION	CWD; VIRO 0/20, FAT 0/22, FLAVOBACTERIUM PSYCHROPHILUM 1/8 (fgm), NUCLEOSPORA 0/4, WHD 0/20
1997	HAYSPUR	RAINBOW TROUT	98-152	5/7/98							-		+		DIAGNOSTIC	CWD, MAS; FLAVOBACTERIUM PSYCHROPHILUM 23/24, AEROMONAS HYDROPHILA 14/24, ENTEROBACTER SPP. 21/24
1998	HAYSPUR	RAINBOW TROUT	98-181	5/30/98							-		+		DIAGNOSTIC	CWD; FLAVOBACTERIUM PSYCHROPHILUM 2/4
1998	HAYSPUR	RAINBOW TROUT	98-182	5/30/98							-		+		DIAGNOSTIC	CWD; FLAVOBACTERIUM PSYCHROPHILUM 4/4
1998	HAYSPUR	RAINBOW TROUT	98-256	8/10/98	-	-					-		+		DIAGNOSTIC	CWD; VIRO 0/10, FLAVOBACTERIUM PSYCHROPHILUM 3/4, CITROBACTER FREUNDII 1/4
1998	HAYSPUR	RAINBOW TROUT	98-339	9/15/98	-	-					-		+		DIAGNOSTIC	CWD; VIRO 0/5, FLAVOBACTERIUM PSYCHROPHILUM 5/5
HAGERMAN NFH																
1997	SAWTOOTH	STEELHEAD, A GROUP	98-100	4/5/98	-	-					-				DIAGNOSTIC	NO PATHOGENS DETECTED; VIRO 0/10, BACTE 0/8
HAGERMAN SFH																
1997	TROUT LODGE	KAMLOOPS RBT	98-019	2/6/98	-	-					-				DIAGNOSTIC	MAS, COLUMNARIS; VIRO 0/10, AEROMONAS HYDROPHILA 7/10, FLAVOBACTERIUM COLUMNARE 7/10, ACINETOBACTER SPP. 7/10
1998	HAYSPUR	RAINBOW TROUT	98-039	3/2/98	-	-					-		+		DIAGNOSTIC	CWD, MAS; VIRO 0/5, FLAVOBACTERIUM PSYCHROPHILUM 4/4, AEROMONAS SOBRIA 3/4, SHEWANELLA PUTREFACIENS 3/4

LOCATION		Class		Sample		ExamType										Diagnoses	
BroodYr	Stock	Species	Log #	Date	ICH	IPN	EIBS	BIO	FUR	ERM	CWD	WHD	CSH	ICH	ExamType	Diagnoses	
1998	HAYSPUR	KAMLOOPS RBT	98-040	3/2/98	-	-	-	-	-	-	+	-	-	-	DIAGNOSTIC	MAS, CWD, VIRO 05, AEROMONAS HYDROPHILA 2/4, FLAVOBACTERIUM PSYCHROPHILUM 1/4	
1998	HAYSPUR	RAINBOW TROUT	98-041	3/2/98	-	-	-	-	-	-	+	-	-	-	DIAGNOSTIC	CWD, PSEUDOMONAS; VIRO 05, FLAVOBACTERIUM PSYCHROPHILUM 4/4, PSEUDOMONAS CHLOROPHILIS 1/4	
1998	HAYSPUR	RAINBOW TROUT	98-042	3/2/98	-	-	-	-	-	-	-	-	-	-	DIAGNOSTIC	MAS, VIRO 05, AEROMONAS HYDROPHILA 2/4	
1997	TROUT LODGE	KAMLOOPS RBT	98-043	3/2/98	+	-	-	-	-	-	+	-	-	-	DIAGNOSTIC	IPN, CWD, IHNV 1/1 5-FISH POOL, IPNV 05, FLAVOBACTERIUM PSYCHROPHILUM 1/4	
1998	HAYSPUR	KAMLOOPS RBT	98-076	3/24/98	-	-	-	-	-	-	+	-	-	-	DIAGNOSTIC	MAS, CWD, VIRO 05, FLAVOBACTERIUM PSYCHROPHILUM 3/4, AEROMONAS CAVIAE 3/4	
1997	TROUT LODGE	KAMLOOPS RBT	98-077	3/24/98	+	-	-	-	-	-	+	-	-	-	DIAGNOSTIC	IPN, CWD, MAS, COLUMNARIS, IHNV 1/1 (5-fish pool), IPNV 05, FLAVOBACTERIUM PSYCHROPHILUM 4/4, AEROMONAS HYDROPHILA 3/4, FLAVOBACTERIUM COLUMNARE 2/4	
1998	COLORADO RIVER	RAINBOW TROUT	98-105	4/7/98	-	-	-	-	-	-	-	-	-	-	DIAGNOSTIC	ENVIRONMENTAL GILL DISEASE, VIRO 0/10	
1998	HAYSPUR	RAINBOW TROUT	98-106	4/7/98	-	-	-	-	-	-	+	-	-	-	DIAGNOSTIC	BACTERIAL SEPTICEMIA, COLUMNARIS, CWD, VIRO 0/10, FLAVOBACTERIUM COLUMNARE 3/8, CHROMOBACTERIUM VIOLACEUM 3/8, FLAVOBACTERIUM PSYCHROPHILUM 1/8	
1997	TROUT LODGE	KAMLOOPS RBT	98-107	4/7/98	-	-	-	-	+	-	+	-	-	-	DIAGNOSTIC	FURUNCULOSIS, CWD, VIRO 0/4, AEROMONAS SALMONICIDA 4/4, FLAVOBACTERIUM PSYCHROPHILUM 1/4	
1998	TROUT LODGE	KAMLOOPS RBT	98-170	5/20/98	-	-	-	-	-	-	-	-	-	-	DIAGNOSTIC	NO REPLICATING VIRUSES DETECTED, VIRO 05	
1998	TROUT LODGE	KAMLOOPS RBT	98-171	5/20/98	-	-	-	-	-	-	-	-	-	-	DIAGNOSTIC	NO REPLICATING VIRUSES DETECTED, VIRO 0/10	
1998	TROUT LODGE	KAMLOOPS RBT	98-172	5/20/98	-	-	-	-	-	-	-	-	-	-	DIAGNOSTIC	NO PATHOGENS DETECTED, VIRO 05, BACTE-NSG	
1998	HAYSPUR	RAINBOW TROUT	98-173	5/20/98	-	-	-	-	-	-	-	-	-	-	DIAGNOSTIC	PSEUDOMONAS, VIRO 05, PSEUDOMONAS SPP. 3/4	
1997	HAYSPUR	RAINBOW TROUT	98-174	5/20/98	-	-	-	-	-	-	+	-	-	-	DIAGNOSTIC	MAS, CWD, VIRO 05, AEROMONAS CAVIAE 2/4, FLAVOBACTERIUM PSYCHROPHILUM 2/4	
1997	TROUT LODGE	KAMLOOPS RBT	98-175	5/20/98	-	-	-	-	+	-	-	-	-	-	DIAGNOSTIC	FUR, VIRO 0/16, AEROMONAS SALMONICIDA 4/16	
1997	TROUT LODGE	KAMLOOPS RBT	98-185	6/3/98	-	-	-	-	+	-	-	-	-	-	DIAGNOSTIC	FUR, VIRO SAMPLES LOST*, AEROMONAS SALMONICIDA 4/8 (4/4 FROM RACEWAY 17, 0/4 FROM RACEWAY 20)	
1997	TROUT LODGE	KAMLOOPS RBT	98-221	7/18/98	-	-	-	-	+	-	+	-	-	-	DIAGNOSTIC	FUR, CWD, MAS, AEROMONAS SALMONICIDA 4/12, FLAVOBACTERIUM PSYCHROPHILUM 4/12, AEROMONAS SOBRIA 5/12, PKX 0/4	
1998	HAYSPUR	KAMLOOPS RBT	98-467	12/30/98	-	-	-	-	-	-	-	-	-	-	DIAGNOSTIC	BACTEREMIA, VIRO 05, PROBABLE PSEUDOMONAS 4/4	
1998	HAYSPUR	RAINBOW TROUT	98-468	12/30/98	-	-	-	-	-	-	+	-	-	-	DIAGNOSTIC	CWD, PSEUDOMONAS, VIRO 05, FLAVOBACTERIUM PSYCHROPHILUM 2/4, PSEUDOMONAS MALLEI 2/4	
1998	TROUT LODGE	KAMLOOPS RBT	98-469	12/30/98	-	-	-	-	-	-	+	-	-	-	DIAGNOSTIC	CWD, VIRO 02, FLAVOBACTERIUM PSYCHROPHILUM 2/2	
HAYDEN CREEK																	
1997	TROUT LODGE	KAMLOOPS RBT	98-144	4/10/98	-	-	-	-	-	-	-	+	-	-	RESEARCH	WHD, MYXOBOLUS CEREBRALIS 6/12 POOLS. HISTO CONFIRMED	
WILD/FERA	HAYDEN CREEK	RAINBOW TROUT	98-145	3/26/98	-	-	-	-	-	-	-	+	-	-	WILD FISH	WHD, MYXOBOLUS CEREBRALIS 1/4 (x3-DIGEST ONLY)	
HAYSPUR HATCHERY																	
BROOD	HAYSPUR	KAMLOOPS RBT	98-001	1/6/98	-	-	-	-	-	-	-	-	-	-	INSPECTION	NO PATHOGENS DETECTED, VIRO 0/12, ELISA 0/10, FAT 0/12	

LOCATION		Class		Sample Date	Log #	Diagnoses													
BroodYr	Stock	Species	IHN			IPN	EB3	BKD	FUR	ERM	CWD	WHO	CSH	ICH	ExamType	Diagnoses			
BROOD	HAYSPUR	KAMLOOPS RBT		1/21/98	98-012	-	-		+					INSPECTION	RS; VIRO 0/28, ELISA 2/10, FAT 1/28				
BROOD	HAYSPUR	KAMLOOPS RBT		2/3/98	98-015						+			INSPECTION	CWD (carrier); FLAVOBACTERIUM PSYCHROPHILUM 6/23 (26%) FROM OVARIAN FLUIDS				
BROOD	HAYSPUR	KAMLOOPS RBT		2/10/98	98-021	-	-		-					INSPECTION	NO PATHOGENS DETECTED; VIRO 0/40, ELISA 0/10, FAT 0/40				
1996	HAYSPUR	RAINBOW TROUT		3/18/98	98-069	-	-		+		-			INSPECTION	RS; VIRO 0/60, FAT 1/60, ELISA 2/12 (BOTH VERY LOW), BACTE 0/20, NUCLEOSPORA 0/6				
BROOD	HAYSPUR	RAINBOW TROUT		10/15/98	98-385	-	-		+					INSPECTION	RS; VIRO 0/20, FAT 0/20, ELISA 1/10 (0.116)				
1998	HAYSPUR	RAINBOW TROUT		10/29/98	98-400	-	-				+			DIAGNOSTIC	CWD; VIRO 0/5, FLAVOBACTERIUM PSYCHROPHILUM 4/5				
BROOD	HAYSPUR	RAINBOW TROUT		10/29/98	98-401	-	-		-					INSPECTION	NO PATHOGENS DETECTED; VIRO 0/30, FAT 0/30, ELISA 0/10				
BROOD	HAYSPUR	KAMLOOPS RBT		10/29/98	98-402	-	-		+					INSPECTION	RS; VIRO 0/20, FAT 1/20, ELISA 2/10 (LOW)				
BROOD	HAYSPUR	RAINBOW TROUT		11/12/98	98-417	-	-		-					INSPECTION	NO PATHOGENS DETECTED; VIRO 0/50, FAT 0/50, ELISA 0/10				
BROOD	HAYSPUR	KAMLOOPS RBT		11/17/98	98-422	-	-		+					INSPECTION	RS; VIRO 0/30, FAT 0/30, ELISA 3/10 (ALL LOW)				
BROOD	HAYSPUR	RAINBOW TROUT		11/24/98	98-423	-	-		+					INSPECTION	RS; VIRO 0/50, FAT 2/50, ELISA 0/10				
BROOD	HAYSPUR	KAMLOOPS RBT		12/1/98	98-436	-	-		+					INSPECTION	RS; VIRO 0/50, ELISA 7/10 (ALL LOW), FAT 0/50				
BROOD	HAYSPUR	RAINBOW TROUT		12/9/98	98-443	-	-		-					INSPECTION	NO PATHOGENS DETECTED; VIRO 0/30, ELISA 0/10, FAT 0/30				
BROOD	HAYSPUR	KAMLOOPS RBT		12/16/98	98-450	-	-		+					INSPECTION	RS; VIRO 0/18, FAT 1/18, ELISA 6/10 (LOW)				
BROOD	HAYSPUR	RAINBOW TROUT		12/23/98	98-460	-	-		-		-			INSPECTION	NO PATHOGENS DETECTED; VIRO 0/12, FAT 0/12, ELISA 0/10, BACTE-CWD 0/12				

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HENRYS LAKE

C

BROOD	HENRYS LAKE	CUTTTHROAT TROUT		3/5/98	98-055	-	-	-	-	-	-	-	-	-	-	INSPECTION	NO PATHOGENS DETECTED; FAT 0/189
BROOD	HENRYS LAKE	CUTTTHROAT TROUT		3/9/98	98-056	-	-	-	-	-	-	-	-	-	-	INSPECTION	NO PATHOGENS DETECTED; VIRO 0/35, FAT 0/154
BROOD	HENRYS LAKE	CUTTTHROAT TROUT		3/12/98	98-064	-	-	-	-	-	-	-	-	-	-	INSPECTION	NO PATHOGENS DETECTED; FAT 0/70
BROOD	HENRYS LAKE	CUTTTHROAT TROUT		3/16/98	98-065	-	-	-	-	-	-	-	-	-	-	INSPECTION	NO PATHOGENS DETECTED; VIRO 0/35, FAT 0/70
BROOD	HENRYS LAKE	CUTTTHROAT TROUT		3/19/98	98-078	-	-	-	-	-	-	-	-	-	-	INSPECTION	NO PATHOGENS DETECTED; FAT 0/70
BROOD	HENRYS LAKE	CUTTTHROAT TROUT		3/23/98	98-079	-	-	-	-	-	-	-	-	-	-	INSPECTION	NO PATHOGENS DETECTED; VIRO 0/35, FAT 0/70
BROOD	HENRYS LAKE	CUTTTHROAT TROUT		3/26/98	98-087	-	-	-	-	-	-	-	-	-	-	INSPECTION	NO PATHOGENS DETECTED; FAT 0/70
BROOD	HENRYS LAKE	CUTTTHROAT TROUT		3/30/98	98-088	-	-	-	-	-	-	-	-	-	-	INSPECTION	NO PATHOGENS DETECTED; VIRO 0/35, FAT 0/70
BROOD	HENRYS LAKE	CUTTTHROAT TROUT		4/6/98	98-101	-	-	-	-	-	-	+	-	-	-	INSPECTION	CWD (CARRIER), VIRO 0/60, FAT 0/60, FLAVOBACTERIUM PSYCHROPHILUM 3/12, WHD 0/60
BROOD	HENRYS LAKE	CUTTTHROAT TROUT		4/2/98	98-102	-	-	-	-	-	-	-	-	-	-	INSPECTION	NO PATHOGENS DETECTED; FAT 0/70
BROOD	HENRYS LAKE	CUTTTHROAT TROUT		4/6/98	98-103	-	-	-	-	-	-	-	-	-	-	INSPECTION	NO PATHOGENS DETECTED; VIRO 0/35, FAT 0/70
BROOD	HENRYS LAKE	CUTTTHROAT TROUT		4/9/98	98-119	-	-	-	-	-	-	-	-	-	-	INSPECTION	NO PATHOGENS DETECTED; FAT 0/70
BROOD	HENRYS LAKE	CUTTTHROAT TROUT		4/13/98	98-120	-	-	-	-	-	-	-	-	-	-	INSPECTION	NO PATHOGENS DETECTED; VIRO 0/70, FAT 0/70

LOCATION		Class		Sample		Diagnoses									
BroodYr	Stock	Species	Log #	Date	IHN	IPN	EIBS	BKD	FUR	ERM	CWD	WHD	CSH	ICH	ExamType
BROOD	HENRYS LAKE	CUTTTHROAT TROUT	98-127	4/16/98											INSPECTION
BROOD	HENRYS LAKE	CUTTTHROAT TROUT	98-128	4/20/98	-	-		-							INSPECTION
BROOD	HENRYS LAKE	CUTTTHROAT TROUT	98-133	4/27/98	-	-		-							INSPECTION
BROOD	HENRYS LAKE	CUTTTHROAT TROUT	98-134	4/23/98				+							INSPECTION
BROOD	HENRYS LAKE	CUTTTHROAT TROUT	98-150	4/30/98				+							INSPECTION
BROOD	HENRYS LAKE	CUTTTHROAT TROUT	98-151	5/4/98	-	-		-							INSPECTION
MACKAY HATCHERY															
1987	PAYETTE LAKE	B	98-141	4/30/98	-	-		-	-	-	-	-			INSPECTION
1987	ARLEE	RAINBOW TROUT	98-142	4/30/98	-	-		-	-	-	-	-			INSPECTION
1987	PAINT BANK	BROWN TROUT	98-143	4/30/98	-	-		-	-	-	-	-			INSPECTION
MAGIC VALLEY HATCHERY															
1987	SAWTOOTH	STEELHEAD, A GROUP	98-022	2/1/98	-	-			-	-	-	-			INSPECTION
1987	DWORSKAK	STEELHEAD, B GROUP	98-023	2/1/98	-	-			-	-	-	-			INSPECTION
1987	EAST FORK SALMON RIVER	STEELHEAD, B GROUP	98-024	2/1/98	-	-			-	-	-	-			INSPECTION
1987	PAHSIMEROI	STEELHEAD, A GROUP	98-025	2/1/98	-	-			-	-	-	-			INSPECTION
1987	SAWTOOTH	STEELHEAD	98-057	3/12/98	-	-			-	-	-	-			INSPECTION
1987	EAST FORK SALMON RIVER	STEELHEAD, B GROUP	98-058	3/12/98	-	-		+							INSPECTION
1987	DWORSKAK	STEELHEAD, B GROUP	98-059	3/12/98	-	-			-	-	-	-			INSPECTION
1987	PAHSIMEROI	STEELHEAD, A GROUP	98-060	3/12/98	-	-			-	-	-	-			INSPECTION
1988	DWORSKAK	STEELHEAD, B GROUP	98-243	7/3/98	-	-			-	-	+	+			DIAGNOSTIC
1988	DWORSKAK	STEELHEAD, B GROUP	98-376	10/8/98	-	-			-	-	+	+			INSPECTION
1988	PAHSIMEROI	STEELHEAD, A GROUP	98-377	10/8/98	-	-			-	-	-	-			INSPECTION
1988	PAHSIMEROI	STEELHEAD, A GROUP	98-415	11/10/98	-	-			-	-	-	-			INSPECTION
1988	DWORSKAK	STEELHEAD, A GROUP	98-416	11/10/98	-	-			-	-	-	-			INSPECTION
1988	DWORSKAK	STEELHEAD, B GROUP	98-446	12/9/98	-	-			-	-	+	+			INSPECTION
1988	PAHSIMEROI	STEELHEAD, A GROUP	98-447	12/9/98	-	-			-	-	+	+			INSPECTION
MCCALL HATCHERY															
C															

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LOCATION		Class		Sample		ExamType										Diagnoses
BroodYr	Stock	Species	Log #	Date	IHN	IPN	EIBS	BKD	FUR	ERM	CWD	WHD	CSH	ICH		
1996	S.F. SALMON RIVER	SUMMER CHINOOK	98-028	2/24/98				+							INSPECTION	BKD, ELISA 4/4 (o.d.s = 0.224, 0.421, 0.505, 0.310), FAT 15/20
1996	S.F. SALMON RIVER	SUMMER CHINOOK	98-048	3/5/98				-		-					INSPECTION	PSEUDOMONAS; FAT 0/3, P. FLUORESCENS 3/3
1996	S.F. SALMON RIVER	SUMMER CHINOOK	98-070	3/19/98	-	-		+				-			INSPECTION	RS; VIRO 0/20, ELISA 4/4(x5)-ALL LOW, FAT 0/20, WHD 0/20
1997	S.F. SALMON RIVER	SUMMER CHINOOK	98-163	5/14/98	-	-		+		-					INSPECTION	RS; VIRO 0/10, FAT 1/10, BACTE-NSG
1997	S.F. SALMON RIVER	SUMMER CHINOOK	98-199	6/18/98	-	-		-		-					INSPECTION	NO PATHOGENS DETECTED; VIRO 0/10, FAT 0/10, BACTE 0/8
1997	S.F. SALMON RIVER	SUMMER CHINOOK	98-250	8/3/98				-		-					INSPECTION	PSEUDOMONAS, FAT 0/10, PSEUDOMONAS SPP. 2/4
1997	S.F. SALMON RIVER	SUMMER CHINOOK	98-360	9/25/98				-		-					INSPECTION	NO PATHOGENS DETECTED; FAT 0/10, BACTE 0/8
1997	S.F. SALMON RIVER	SUMMER CHINOOK	98-362	9/25/98						-				+	DIAGNOSTIC	MAS, ICH; AEROMONAS HYDROPHILA 2/4, ICHTHYOPHITHIRIUS
1997	S.F. SALMON RIVER	SUMMER CHINOOK	98-418	11/13/98				-		-					INSPECTION	NO PATHOGENS DETECTED; FAT 0/10, BACTE 0/4
1997	S.F. SALMON RIVER	SUMMER CHINOOK	98-451	12/16/98	-	-		-		-					INSPECTION	NO PATHOGENS DETECTED; VIRO 0/10, FAT 0/10, BACTE 0/8
NAMPA HATCHERY																
A																
1997	TROUT LODGE	KAMLOOPS RBT	98-016	2/5/98	-	-				-	+				DIAGNOSTIC	MAS, CWD, VIRO 0/10, AEROMONAS CAVIEA 1/8, FLAVOBACTERIUM PSYCHROPHILUM 1/8, ACNETOBACTER SPP. 1/8
1997	TROUT LODGE	KAMLOOPS RBT	98-017	2/5/98						-	+				DIAGNOSTIC	MAS, CWD, VIRO 0/5, AEROMONAS SOBRIA 1/4, FLAVOBACTERIUM PSYCHROPHILUM 1/4
1997	MT LASSEN	RAINBOW TROUT	98-018	2/5/98	-	-				-	+				DIAGNOSTIC	PSEUDOMONAS, CWD; VIRO 0/5, PSEUDOMONAS SPP. 1/4, FLAVOBACTERIUM PSYCHROPHILUM 1/4
1997	SARATOGA	BROWN TROUT	98-038	2/27/98	-	-				-	-				DIAGNOSTIC	MAS; VIRO 0/10, AEROMONAS SOBRIA 2/8, PSEUDOMONAS SPP. 2/8
1997	TROUT LODGE	KAMLOOPS RBT	98-090	4/1/98						-	+				DIAGNOSTIC	CWD; FLAVOBACTERIUM PSYCHROPHILUM 1/4
1998	HAYSPUR	RAINBOW TROUT	98-210	7/2/98	-	-				-	+				DIAGNOSTIC	MAS, CWD; VIRO 0/5, AEROMONAS SOBRIA 5/5, FLAVOBACTER PSYCHROPHILUM 5/5
1998	COLORADO RIVER	RAINBOW TROUT	98-227	7/27/98	-	-				-	+				DIAGNOSTIC	MAS, CWD; VIRO 0/12, AEROMONAS SOBRIA 9/12, FLAVOBACTERIUM PSYCHROPHILUM 8/12
1998	TROUT LODGE	KAMLOOPS RBT	98-461	12/24/98						-	-				DIAGNOSTIC	MAS; VIRO 0/6, AEROMONAS HYDROPHILA 1/6, BLUEGREEN ALGAE 0/5
NAMPA RESEARCH																
D																
WILD	S.F. BOISE RIVER	RAINBOW TROUT	98-005	1/8/98								+			WILD FISH	WHD; MYXOBOLUS CEREBRALIS 5/9
WILD	BIG WOOD RIVER	RAINBOW TROUT	98-006	1/8/98								+			WILD FISH	WHD; MYXOBOLUS CEREBRALIS 15/20
WILD	BIG WOOD RIVER	BROOK TROUT	98-007	1/8/98								+			WILD FISH	WHD; MYXOBOLUS CEREBRALIS 4/8
WILD	WARM SPRINGS CR.-BIG WOOD	RAINBOW TROUT	98-008A	1/8/98								+			WILD FISH	WHD; MYXOBOLUS CEREBRALIS 2/6
WILD	WARM SPRINGS CR.-BIG WOOD	BROOK TROUT	98-008B	1/8/98								+			WILD FISH	WHD; MYXOBOLUS CEREBRALIS 1/1
1997	UNKNOWN	RAINBOW TROUT	98-155	5/8/98											RESEARCH	HISTO: HEMORRHAGE BETWEEN MUSCLE BUNDLES AND DEGENERATION OF MUSCLE BUNDLES. EVIDENCE OF FIBROCYTES AND FIBROUS REPAIR BETWEEN BUNDLES

LOCATION		Class		Sample		Diagnoses										
BroodYr	Stock	Species	Log #	Date	IHN	IPN	EBS	BKD	FUR	ERM	CWD	WHD	CSH	ICH	ExamType	Diagnoses
Page 15																
WILD	S.F. BOISE RIVER	RAINBOW TROUT	98-439	11/19/98								+			RESEARCH	WHD; MYXOBOLUS CEREBRALIS 34(x5) BY DIGEST, 3/15 INDIVIDUAL (ENUMERATION OF POSITIVE POOLS)
WILD	S.F. BOISE RIVER	RAINBOW TROUT	98-440	11/19/98								+			RESEARCH	WHD; MYXOBOLUS CEREBRALIS 44(x5) BY DIGEST, 11/20 INDIVIDUAL ENUMERATION.
WILD	S.F. BOISE RIVER	RAINBOW TROUT	98-441	11/16/98								+			RESEARCH	WHD; MYXOBOLUS CEREBRALIS 34 (x5) BY DIGEST, 12/15 INDIVIDUAL ENUMERATION
WILD	PIKE'S FORK CREEK (N.F. BOISE)	BROOK TROUT	98-448	9/15/98								-			WILD FISH	NO PATHOGENS DETECTED; WHD 0/20 (DIGEST ONLY)
NIAGARA SPRINGS HATCHERY																
C																
1997	HELLS CANYON (SNAKE RIVER)	STEELHEAD, A GROUP	98-020	2/10/98	-	-		-	-	-	+				INSPECTION	MAS, CWD; VIRO 0/7, AEROMONAS HYDROPHILA 2/7, FLAVOBACTERIUM PSYCHROPHILUM 5/7.
1997	HELLS CANYON (SNAKE RIVER)	STEELHEAD, A GROUP	98-066	3/18/98	-	-		+				-			INSPECTION	RS; VIRO 0/20, FAT 9/20, WHD 0/20
1997	PAHSIMEROI	STEELHEAD, A GROUP	98-067	3/18/98	-	-		-				-			INSPECTION	NO PATHOGENS DETECTED; VIRO 0/20, FAT 0/20, WHD 0/20
1998	HELLS CANYON (SNAKE RIVER)	STEELHEAD, A GROUP	98-230	7/27/98	-	-			-	-	-				INSPECTION	NO PATHOGENS DETECTED; VIRO 0/10, BACTE 0/4
	PAHSIMEROI	STEELHEAD, A GROUP	98-231	7/27/98	-	-									INSPECTION	MAS, BACTEREMIA; VIRO 0/10, AEROMONAS HYDROPHILA 1/4, FLAVOBACTERIUM INDOGENES 1/4
1998	PAHSIMEROI	STEELHEAD, A GROUP	98-318	9/3/98	-	-			-	-	-				INSPECTION	MAS; VIRO 0/5, AEROMONAS HYDROPHILA 1/4
1998	HELLS CANYON (SNAKE RIVER)	STEELHEAD, A GROUP	98-383	10/15/98	-	-			-	-	-				INSPECTION	NO PATHOGENS DETECTED; VIRO 0/10, BACTE NSG
1998	PAHSIMEROI	STEELHEAD, A GROUP	98-384	10/15/98	-	-			-	-	-				INSPECTION	NO PATHOGENS DETECTED; VIRO 0/10, BACTE NSG
1998	HELLS CANYON (SNAKE RIVER)	STEELHEAD, A GROUP	98-413	11/10/98	-	-			-	-	-				INSPECTION	NO PATHOGENS DETECTED; VIRO 0/10, BACTE 0/8
1998	PAHSIMEROI	STEELHEAD, A GROUP	98-414	11/10/98	+	-					+				INSPECTION	IHNV (probable), CWD, PSEUDOMONAS; IHNV 1/2 (x5), IPNV 0/10, FLAVOBACTERIUM PSYCHROPHILUM 7/8, PSEUDOMONAS SP. 6/8
1998	HELLS CANYON (SNAKE RIVER)	STEELHEAD, A GROUP	98-444	12/9/98	-	-			-	-	+				INSPECTION	CWD (carrier); VIRO 0/10, FLAVOBACTERIUM PSYCHROPHILUM 1/4 (1 COLONY)
1998	PAHSIMEROI	STEELHEAD, A GROUP	98-445	12/9/98	-	-			-	-	+				INSPECTION	CWD, MAS; VIRO 0/10, FLAVOBACTERIUM PSYCHROPHILUM 4/4, AEROMONAS HYDROPHILA 4/4
1998	HELLS CANYON (SNAKE RIVER)	STEELHEAD, A GROUP	99-017	1/27/98	-	-			+	-	+				DIAGNOSTIC	FUR, CWD; VIRO 0/10, AEROMONAS SALMONICIDA 8/8, FLAVOBACTERIUM PSYCHROPHILUM 5/8
NMFs, MANCHESTER, WA																
BY94	LEMHI RIVER	CHINOOK CAPTIVE	98-135	4/29/98				+							INSPECTION	RS; ELISA 4/17 (O.D.s = 0.108, 0.100, 0.103, 0.101)
BY94	YANKEE FORK RIVER	CHINOOK CAPTIVE	98-136	4/29/98				+							INSPECTION	RS; ELISA 13/20 (0.101, 0.104, 0.110, 0.125, 0.111, 0.129, 0.115, 0.106, 0.113, 0.102, 0.115, 0.114, 0.111, 0.105)
BY94	EAST FORK SALMON RIVER	CHINOOK CAPTIVE	98-137	4/29/98				+							INSPECTION	RS; ELISA 12/15 (0.116, 0.135, 0.127, 0.156, 0.114, 0.128, 0.129, 0.112, 0.108, 0.123, 0.125, 0.101)
OXBOW HATCHERY																
C																

LOCATION		Class		Log #	Sample Date	Diagnoses									
BroodYr	Stock	Species				INH	IPM	EIBS	BKD	FUR	ERM	CHD	WHD	CSH	IGH
BROOD	HELLS CANYON (SNAKE RIVER)	STEELHEAD, A GROUP		98-062	3/16/98	-	-	-	-	-	-	-	-	-	INSPECTION
NO PATHOGENS DETECTED; VIRO 050, FAT 020, WHD 025															
BROOD	HELLS CANYON (SNAKE RIVER)	STEELHEAD, A GROUP		98-081	3/30/98	-	-	-	-	-	-	-	-	-	INSPECTION
NO PATHOGENS DETECTED; VIRO 050, FAT 021															
BROOD	HELLS CANYON (SNAKE RIVER)	STEELHEAD, A GROUP		98-096	4/6/98	-	-	-	-	-	-	-	-	-	INSPECTION
NO PATHOGENS DETECTED; VIRO 050, FAT 020															
PAHSIMEROI HATCHERY															
1996	PAHSIMEROI	SUMMER CHINOOK		98-046	3/4/98	-	-	-	+	-	-	-	-	-	INSPECTION
BKO, VIRO 020, FAT 420, WHD 020															
BROOD	PAHSIMEROI	STEELHEAD, A GROUP		98-063	3/16/98	-	-	-	-	-	-	-	-	-	INSPECTION
NO PATHOGENS DETECTED; VIRO 03															
BROOD	PAHSIMEROI	STEELHEAD, A GROUP		98-071	3/16/98	-	-	-	-	-	-	-	-	-	INSPECTION
NO PATHOGENS DETECTED; VIRO 07, WHD 01															
BROOD	PAHSIMEROI	STEELHEAD, A GROUP		98-072	3/23/98	-	-	-	-	-	-	-	-	-	INSPECTION
NO PATHOGENS DETECTED; VIRO 027															
BROOD	PAHSIMEROI	STEELHEAD, A GROUP		98-082	3/20/98	-	-	-	-	-	-	-	-	-	INSPECTION
NO PATHOGENS DETECTED; VIRO 018, FAT 013															
BROOD	PAHSIMEROI	STEELHEAD, A GROUP		98-094	4/2/98	-	-	-	-	-	-	-	-	-	INSPECTION
NO PATHOGENS DETECTED; VIRO 020, WHD 01															
BROOD	PAHSIMEROI	STEELHEAD, A GROUP		98-099	4/6/98	-	-	-	-	-	-	-	-	-	INSPECTION
NO PATHOGENS DETECTED; VIRO 020															
BROOD	PAHSIMEROI	STEELHEAD, A GROUP		98-113	4/9/98	-	-	-	-	-	-	-	-	-	INSPECTION
NO PATHOGENS DETECTED; VIRO 020															
BROOD	PAHSIMEROI	STEELHEAD, A GROUP		98-116	4/13/98	-	-	-	-	-	-	-	-	-	INSPECTION
NO PATHOGENS DETECTED; VIRO 020															
BROOD	PAHSIMEROI	STEELHEAD, A GROUP		98-122	4/16/98	-	-	-	-	-	-	-	+	-	INSPECTION
WHD, VIRO 020, FAT 054, WHD 1/4 (3-FISH POOLS-DIGEST ONLY)															
BROOD	PAHSIMEROI	STEELHEAD, A GROUP		98-125	4/20/98	-	-	-	-	-	-	-	-	-	INSPECTION
NO PATHOGENS DETECTED; WHD 010															
BROOD	PAHSIMEROI	SUMMER CHINOOK		98-310	8/31/98	-	-	-	+	-	-	-	-	-	INSPECTION
RS, VIRO 03, ELISA 2/3 (2 LOW)															
BROOD	PAHSIMEROI	SUMMER CHINOOK		98-331	9/7/98	-	-	-	+	-	-	-	-	-	INSPECTION
RS, VIRO 02, ELISA 2/2 (2 LOW), WHD 02															
BROOD	PAHSIMEROI	SUMMER CHINOOK		98-336	9/14/98	-	-	-	+	-	-	-	-	-	INSPECTION
RS, VIRO 02, ELISA 2/2 (2 LOW), WHD 02															
BROOD	PAHSIMEROI	SUMMER CHINOOK		98-344	9/17/98	-	-	-	+	-	-	-	-	-	INSPECTION
RS, VIRO 01, ELISA 1/1 (0.122), WHD 01															
BROOD	PAHSIMEROI	SUMMER CHINOOK		98-355	9/21/98	-	-	-	+	-	-	-	-	-	INSPECTION
RS, VIRO 01, ELISA 1/1 (0.114), WHD 01															
1997	PAHSIMEROI	SUMMER CHINOOK		98-363	9/27/98	-	-	-	-	-	-	-	-	-	INSPECTION
NO PATHOGENS DETECTED; VIRO 010, FAT 010, BACTE 04															
BROOD	PAHSIMEROI	SUMMER CHINOOK		98-371	9/24/98	-	-	-	+	-	-	-	+	-	INSPECTION
RS, WHD, VIRO 01, ELISA 1/1 (0.129), WHD 1/1 (DIGEST ONLY)															
BROOD	PAHSIMEROI	SUMMER CHINOOK		98-372	9/29/98	-	-	-	+	-	-	-	-	-	INSPECTION
RS, VIRO 01, ELISA 1/1 (0.111), WHD 01															
BROOD	PAHSIMEROI	SUMMER CHINOOK		98-373	10/6/98	-	-	-	+	-	-	-	-	-	INSPECTION
RS, VIRO 01, ELISA 1/1 (0.144), WHD 01															
BROOD	PAHSIMEROI	SUMMER CHINOOK		98-387	10/9/98	-	-	-	+	-	-	-	-	-	INSPECTION
BKO, VIRO 01, ELISA 2/2 (0.102, 3.215), WHD 01															
1997	PAHSIMEROI	SUMMER CHINOOK		98-455	12/17/98	-	-	-	-	-	-	-	-	-	INSPECTION
NO PATHOGENS DETECTED; VIRO 010, BACTE 08															
POWELL SATELLITE															
1996	POWELL	SPRING CHINOOK		98-110	4/8/98	-	-	-	+	-	-	-	-	-	INSPECTION
RS, VIRO 020, FAT 010, ELISA 3/4 (4.5), WHD 020															
1997	POWELL	SPRING CHINOOK		98-235	7/29/98	-	-	-	-	-	-	-	-	-	INSPECTION
NO PATHOGENS DETECTED; VIRO 010, FAT 010															

LOCATION		Class		Sample		Diagnoses									
BroodYr	Stock	Species	Log #	Date	IHH	IPH	EIBS	BKD	FUR	ERM	CWD	WHD	CSH	ICH	ExamType
BROOD	POWELL	SPRING CHINOOK	98-246	8/3/98				+							INSPECTION
BROOD	POWELL	SPRING CHINOOK	98-252	8/6/98				+							INSPECTION
BROOD	POWELL	SPRING CHINOOK	98-264	8/10/98	-	-		+							INSPECTION
BROOD	POWELL	SPRING CHINOOK	98-279	8/17/98	-	-		+							INSPECTION
BROOD	POWELL	SPRING CHINOOK	98-280	8/13/98				+							INSPECTION
BROOD	POWELL	SPRING CHINOOK	98-292	8/24/98	-	-		+							INSPECTION
BROOD	POWELL	SPRING CHINOOK	98-294	8/20/98				+							INSPECTION
BROOD	POWELL	SPRING CHINOOK	98-314	8/27/98				+							INSPECTION
BROOD	POWELL	SPRING CHINOOK	98-315	8/31/98				+							INSPECTION
BROOD	POWELL	SPRING CHINOOK	98-341	9/4/98				+				-			INSPECTION
1997	POWELL	SPRING CHINOOK	98-351	9/20/98	-	-		+				-			INSPECTION
PRIVATE															
1997	HYBRID	TILAPIA	98-027	2/17/98	-	-		-		-		-			INSPECTION
ADULT	UNKNOWN	KOI CARP	98-083	3/31/98	-	-			-	-					DIAGNOSTIC
ADULT	UNKNOWN	KOI CARP	98-157	5/12/98	-	-									DIAGNOSTIC
1998	EPICENTER AQUACULTURE	TILAPIA	98-197	6/16/98	-	-		-		-		-			INSPECTION
MIXED	UNKNOWN	KOI CARP	98-286	8/20/98											DIAGNOSTIC
1998	ACE DEVELOPMENT	TILAPIA	98-437	12/8/98	-	-		-		-		-			CERTIFICATION
RANGEN AQUA CTR															
UNKNOWN	UNKNOWN	TILAPIA	98-234	7/29/98											INSPECTION
RAPID RIVER HATCHERY															
1996	RAPID RIVER	SPRING CHINOOK	98-029	2/24/98				+		-		-			INSPECTION
1997	RAPID RIVER	SPRING CHINOOK	98-030	2/24/98	-	-									INSPECTION
1996	RAPID RIVER	SPRING CHINOOK	98-051	3/9/98	-	-	-	+				-			INSPECTION
1997	RAPID RIVER	SPRING CHINOOK	98-164	5/14/98	-	-		+		-		-			INSPECTION

NO PATHOGENS DETECTED: VIRO 060, BACTE 060, CSH 060, BKD (FAT) 060, WHD 060

MOTILE AEROMONAS SEPTICEMIA: VIRO 0/1, AEROMONAS HYDROPHILA 1/1, SHEWANELLA PUTREFACIENS 1/1

MAS, VIRO 0/1, AEROMONAS SOBRIA

NO REPORTABLE PATHOGENS DETECTED: VIRO 0/60, FAT (BKD) 0/60, FUR 0/60, ERM 0/60, AEROMONAS SOBRIA 3/60, POSSIBLE STREPTOCOCCUS 4/60, WHD 0/60, C. SHASTA 0/60

UNDETERMINED ETIOLOGY, POSSIBLE SYSTEMIC INFECTION OR GILL DISEASE

MAS, EDWARDSIELLA, VIRO 0/60, FAT(BKD) 0/60, C. SHASTA 0/60, AEROMONAS HYDROPHILA 12/60, EDWARDSIELLA TARDIA 2/60

ISOLATE#4-PROBABLE MICROCOCCI (gram +); ISOLATE #6-AEROMONAS SOBRIA, ISOLATE #8-AEROMONAS HYDROPHILA

BKD, FAT 2/10, BACTE-NSG

NO PATHOGENS DETECTED, VIRO 0/10

MYXOBOLUS, RS: VIRO 0/20, EIBS 0/10, FAT 0/20, ELISA 4/4 (x5, O.D. = 0.179, 0.184, 0.194, 0.342), WHD 0/20, MYXOBOLUS SPP. 1/4 (x5)

RS: VIRO 0/10, FAT 1/10, BACTE-NSG

LOCATION		Class		Sample		Diagnoses									
BroodYr	Stock	Species	Log #	Date	IHN	IPN	EIB3	BKD	FUR	ERM	CWD	WHD	CSH	ICH	ExamType
1997	RAPID RIVER	SPRING CHINOOK	98-189	6/11/98				+	-	-	-				INSPECTION
1997	RAPID RIVER	SPRING CHINOOK	98-238	7/29/98	-	-		-	-	-	+				DIAGNOSTIC
BROOD	RAPID RIVER	SPRING CHINOOK	98-275	8/18/98	+	-		+							INSPECTION
BROOD	RAPID RIVER	SPRING CHINOOK	98-285	8/21/98				+							INSPECTION
BROOD	RAPID RIVER	SPRING CHINOOK	98-280A	8/25/98	+	-		+				-			INSPECTION
BROOD	RAPID RIVER	SPRING CHINOOK	98-290B	8/25/98											INSPECTION
BROOD	RAPID RIVER	SPRING CHINOOK	98-290C	8/25/98											INSPECTION
BROOD	RAPID RIVER	SPRING CHINOOK	98-302A	8/28/98				+							INSPECTION
BROOD	RAPID RIVER	SPRING CHINOOK	98-302B	8/28/98											INSPECTION
BROOD	RAPID RIVER	SPRING CHINOOK	98-302C	8/28/98											INSPECTION
BROOD	RAPID RIVER	SPRING CHINOOK	98-302D	8/28/98											INSPECTION
BROOD	RAPID RIVER	SPRING CHINOOK	98-302E	8/28/98											INSPECTION
BROOD	RAPID RIVER	SPRING CHINOOK	98-309A	9/1/98	-	-		+							INSPECTION
BROOD	RAPID RIVER	SPRING CHINOOK	98-309B	9/1/98											INSPECTION
BROOD	RAPID RIVER	SPRING CHINOOK	98-309C	9/1/98											INSPECTION
BROOD	RAPID RIVER	SPRING CHINOOK	98-322A	9/4/98				+							INSPECTION
BROOD	RAPID RIVER	SPRING CHINOOK	98-322B	9/4/98											INSPECTION
BROOD	RAPID RIVER	SPRING CHINOOK	98-327	9/8/98				+							INSPECTION
1997	RAPID RIVER	SPRING CHINOOK	98-361	9/25/98				-	-	-	+				INSPECTION
BROOD	RAPID RIVER	SPRING CHINOOK	98-375	9/1/98				+							INSPECTION
1997	RAPID RIVER	SPRING CHINOOK	98-419	11/13/98				-	-	-	-				INSPECTION
1997	RAPID RIVER	SPRING CHINOOK	98-452	12/16/98	-	-		-	-	-	-				INSPECTION
RED RIVER SATELLITE															
1996	RED RIVER	SPRING CHINOOK	98-112	4/9/98	-	-		-				-			INSPECTION
1997	RED RIVER	SPRING CHINOOK	98-236	7/29/98	-	-		-							INSPECTION
BROOD	S.F. CLEARWATER RIVER	SPRING CHINOOK	98-265	8/1/98				+							INSPECTION
BROOD	S.F. CLEARWATER RIVER	SPRING CHINOOK	98-281	8/18/98	+	-		+							INSPECTION
BROOD	S.F. CLEARWATER RIVER	SPRING CHINOOK	98-293	8/25/98	+	-		+							INSPECTION

RS, BACTEREMIA; FAT 1/10, AEROMONAS SOBRIA 1/8, A. CAVIAE 1/8, PSEUDOMONAS CHLOROPHAPS 1/8 (ONE COLONY OF EACH)

CWD, MAS; VIRO 0/10, FAT 0/10, FLAVOBACTERIUM PSYCHROPHILUM 2/4, AEROMONAS HYDROPHILA 1/4

IHN, BKD, IPNV 6/20, IPNV 0/20, ELISA 18/20 (15 LOW, 3 HIGH)

BKD, ELISA 23/41 (18 LOW, 5 HIGH)

IHN, BKD, IPNV 4/20, IPNV 0/20, ELISA 146/165 (114 LOW, 32 HIGH), WHD 0/20

SEE ACCESSION 98-290A

SEE ACCESSION 98-290A

BKD, ELISA 227/242 (176 LOW, 51 HIGH)

SEE ACCESSION 98-302A

SEE ACCESSION 98-302A

SEE ACCESSION 98-302A

SEE ACCESSION 98-302A

BKD; VIRO 0/20, ELISA 152/155 (98 LOW, 54 HIGH)

SEE ACCESSION 98-309A

SEE ACCESSION 98-309A

BKD; ELISA 111/115 (81 LOW, 30 HIGH)

SEE ACCESSION 98-322A

BKD, ELISA 40/44 (26 LOW, 14 HIGH)

MAS, CWD; FAT 0/10, AEROMONAS HYDROPHILA 6/8, FLAVOBACTERIUM PSYCHROPHILUM 4/8

BKD; ELISA 7/7 (5 LOW, 2 HIGH)

NO PATHOGENS DETECTED; FAT 0/10, BACTE 0/4

NO PATHOGENS DETECTED; VIRO 0/6, FAT 0/10, BACTE 0/8

NO PATHOGENS DETECTED; VIRO 0/20, FAT 0/20, ELISA 0/20, WHD 0/20

NO PATHOGENS DETECTED; VIRO 0/10, FAT 0/10

RS; ELISA 1/1 (O.D.=0.388)

IHN, RS, IPNV 1/3, IPNV 0/3, ELISA 4/4 (2 LOW, 2 HIGH)

IHN, RS, IPNV 10/34, IPNV 0/34, ELISA 25/25 (10 LOW, 15 HIGH)

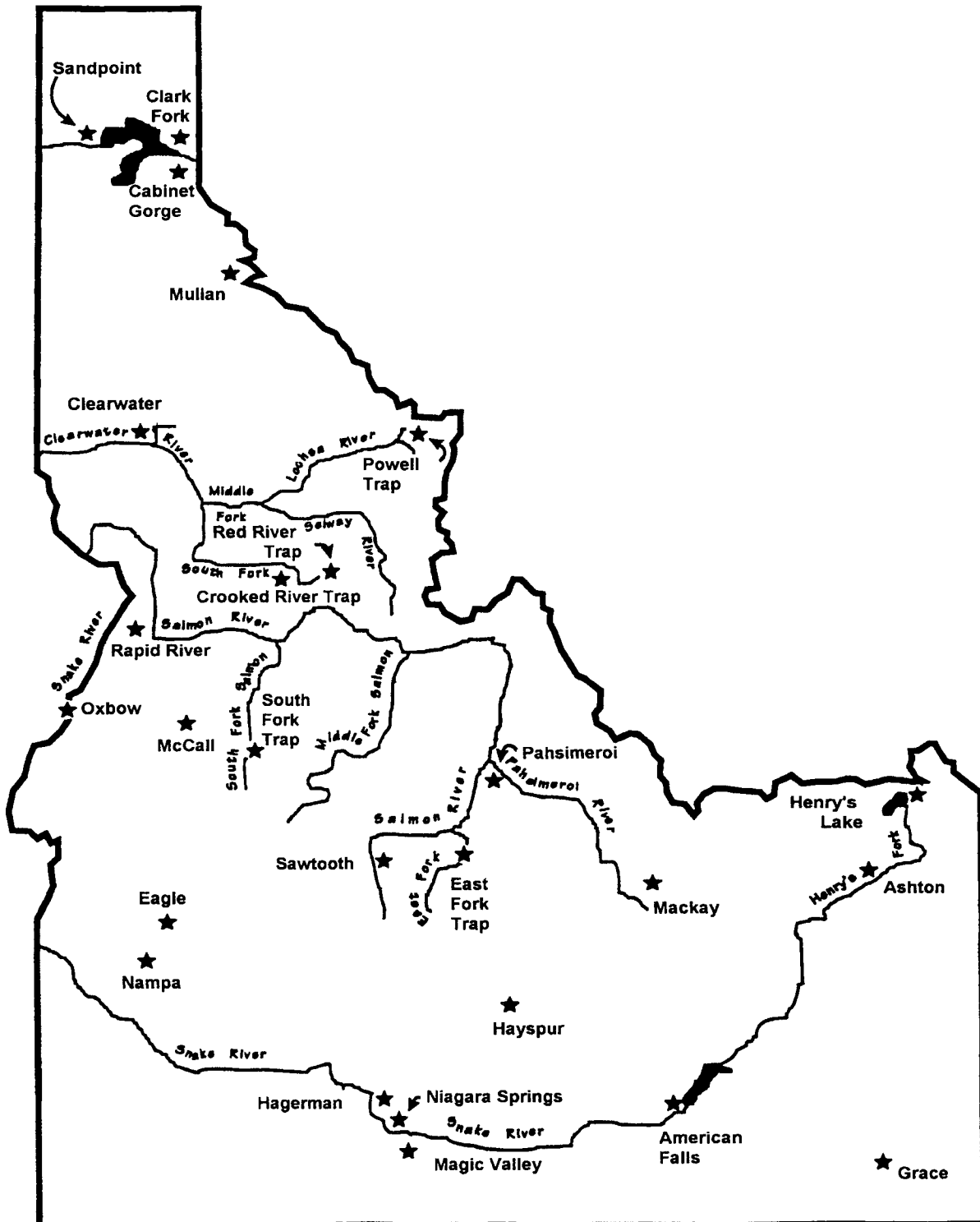
LOCATION		Class		Log #	Sample Date	Diagnoses										Exam Type	Diagnoses
BroodYr	Stock	Species	IHN			IPN	EBS	BKD	FUR	ERM	CWD	WHD	CSH	ICH			
BROOD	S.F. CLEARWATER RIVER	SPRING CHINOOK	98-295	8/21/98			+							INSPECTION	BKD; ELISA 9/8 (8 LOW, 1 HIGH)		
BROOD	S.F. CLEARWATER RIVER	SPRING CHINOOK	98-317	9/1/98	+	-	+							INSPECTION	IHNV, BKD; IHNV 4/5, IPNV 0/5, ELISA 5/5 (4 LOW, 1 HIGH)		
BROOD	S.F. CLEARWATER RIVER	SPRING CHINOOK	98-342	9/4/98			+							INSPECTION	BKD; ELISA 7/7 (3 LOW, 4 HIGH), WHD 0/19		
1997	S.F. CLEARWATER RIVER	SPRING CHINOOK	98-346	9/17/98	-	-	+							INSPECTION	RS; VIRO 0/20, FAT 0/20, ELISA 4/4 (x5, O.D.=0.115, 0.108, 0.118, 0.121), WHD 0/20		
REDFISH LAKE NET PENS																	
1997	RED FISH LAKE	SOCKEYE SALMON	98-332	9/9/98					-					DIAGNOSTIC	MAS; AEROMONAS HYDROPHILA 4/4		
SAWTOOTH HATCHERY																	
1997	SAWTOOTH	SPRING CHINOOK	98-013	1/22/98	-	-			-					DIAGNOSTIC	PSEUDOMONAS; VIRO 0/5, PSEUDOMONAS FLUORESCENS 4/4		
1996	RED FISH LAKE	SOCKEYE SALMON	98-014	1/22/98										DIAGNOSTIC	NO PATHOGENS DETECTED; BACTE 0/4		
1996	SAWTOOTH	SPRING CHINOOK	98-044	3/3/98	-	-	-							INSPECTION	NO PATHOGENS DETECTED; VIRO 0/20, FAT 0/20, WHD 0/20		
1997	SAWTOOTH	SPRING CHINOOK	98-045	3/3/98			-							INSPECTION	NO PATHOGENS DETECTED; FAT 0/2		
BROOD	SAWTOOTH	STEELHEAD, A GROUP	98-089	3/30/98	-	-								INSPECTION	NO PATHOGENS DETECTED; VIRO 0/15		
BROOD	SAWTOOTH	STEELHEAD, A GROUP	98-092	4/2/98	-	-								INSPECTION	NO PATHOGENS DETECTED; VIRO 0/11		
BROOD	SAWTOOTH	STEELHEAD, A GROUP	98-104	4/6/98	-	-								INSPECTION	NO PATHOGENS DETECTED; VIRO 0/25		
BROOD	SAWTOOTH	STEELHEAD, A GROUP	98-109	4/9/98	-	-								INSPECTION	NO PATHOGENS DETECTED; VIRO 0/28		
BROOD	SAWTOOTH	STEELHEAD, A GROUP	98-118	4/13/98	-	-								INSPECTION	NO PATHOGENS DETECTED; VIRO 0/34		
BROOD	SAWTOOTH	STEELHEAD, A GROUP	98-121	4/16/98	-	-	+							INSPECTION	RS; VIRO 0/24, FAT 1/60		
BROOD	SAWTOOTH	STEELHEAD, A GROUP	98-126	4/20/98	-	-								INSPECTION	NO PATHOGENS DETECTED; VIRO 0/12		
BROOD	EAST FORK SALMON RIVER	STEELHEAD, B GROUP	98-131	4/24/98	-	-								INSPECTION	NO PATHOGENS DETECTED; VIRO 0/1		
BROOD	EAST FORK SALMON RIVER	STEELHEAD, A GROUP	98-148	5/1/98	-	-								INSPECTION	NO PATHOGENS DETECTED; VIRO 0/1		
1997	SAWTOOTH	SPRING CHINOOK	98-149	5/5/98	-	-	-							INSPECTION	NO PATHOGENS DETECTED; VIRO 0/2, FAT 0/2, BACTE-NSG		
1997	RED FISH LAKE	SOCKEYE SALMON	98-156	5/11/98										DIAGNOSTIC	BACTEREMIA; ENTEROBACTER AGGLOMERANS 2/4		
BROOD	EAST FORK SALMON RIVER	STEELHEAD, B GROUP	98-166	5/14/98			-							INSPECTION	NO PATHOGENS DETECTED; FAT 0/10, WHD 0/8		
BROOD	SAWTOOTH	STEELHEAD, A GROUP	98-167	5/14/98										INSPECTION	NO PATHOGENS DETECTED; WHD 0/20		
1997	SAWTOOTH	SPRING CHINOOK	98-208	7/1/98	-	-	-							INSPECTION	MAS, PSEUDOMONAS; VIRO 0/14, FAT 0/13, AEROMONAS HYDROPHILA 3/14, PSEUDOMONAS AL CALIGENES 2/14		
BROOD	SAWTOOTH	SPRING CHINOOK	98-276	8/13/98	-	-								INSPECTION	NO PATHOGENS DETECTED; VIRO 0/3		
BROOD	SAWTOOTH	SPRING CHINOOK	98-277	8/17/98	-	-								INSPECTION	NO PATHOGENS DETECTED; VIRO 0/3		
1997	RED FISH LAKE	SOCKEYE SALMON	98-278	8/20/98					-					DIAGNOSTIC	NO PATHOGENS DETECTED; BACTE 0/4		
BROOD	SAWTOOTH	SPRING CHINOOK	98-282	8/20/98	-	-								INSPECTION	NO PATHOGENS DETECTED; VIRO 0/2		
BROOD	SAWTOOTH	SPRING CHINOOK	98-291	8/24/98	-	-								INSPECTION	NO PATHOGENS DETECTED; VIRO 0/3		

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LOCATION		Class		Sample		ExamType										Diagnoses	
BroodYr	Stock	Species	Log #	Date	IRN	IPN	EBIS	BKD	FUR	ERM	CWD	WHD	CSH	ICH	ExamType	Diagnoses	
BROOD 1997	SAWTOOTH	SPRING CHINOOK	98-297	8/27/98	-	-									INSPECTION	NO PATHOGENS WERE DETECTED, VIRO 07	
	SAWTOOTH	SPRING CHINOOK	98-298	8/27/98	-	-		-	-	-	-				DIAGNOSTIC	PSEUDOMONAS; VIRO 06; FAT 06; PSEUDOMONAS PUTIDA 2/4, CHROMOBACTERIUM VIOLACEUM 2/4	
	SAWTOOTH	SPRING CHINOOK	98-311	8/31/98	-	-									INSPECTION	NO PATHOGENS DETECTED, VIRO 07	
	SAWTOOTH	SPRING CHINOOK	98-312	9/1/98	-	-									INSPECTION	NO PATHOGENS DETECTED; VIRO 01	
BROOD	SAWTOOTH	SPRING CHINOOK	98-333	7/21/98	-	-		+				+			INSPECTION	BKD, WHD; VIRO 01, ELISA 2027 (16 LOW, 4 HIGH), WHD 25 (4-5, DIGEST ONLY), WHD-PCR 2/4*	
1997	LEMHI RIVER	CHINOOK CAPTIVE	98-386	10/15/98	-	-		+				-			DIAGNOSTIC	RS; VIRO 01, ELISA 1/1 (O.D.=0.102), WHD 0/1	
1997	W.F. YANKEE FORK	CHINOOK CAPTIVE	98-407	11/4/98	-	-		-	-	-	-	+			DIAGNOSTIC	WHD; VIRO 01, FAT 01, ELISA 0/1 (O.D.=0.085), BACTE 0/1, MYXOBOLUS CEREBRALIS 1/1 (DIGEST), PCR-MYXOBOLUS CEREBRALIS 1/1	
1997	LEMHI RIVER	CHINOOK CAPTIVE	98-420	11/14/98	-	-		-				+			DIAGNOSTIC	WHD; VIRO 02, FAT 02, WHD 12 (DIGEST ONLY)	
1997	W.F. YANKEE FORK	CHINOOK CAPTIVE	98-421	11/14/98	-	-		-				-			DIAGNOSTIC	NO PATHOGENS DETECTED, ANESTHETIC OVERDOSE; VIRO 07, FAT 07, WHD 07	
1997	SAWTOOTH	SPRING CHINOOK	98-456	12/18/98					-	-	+				INSPECTION	CWD, MAS; FAT 0/10, FLAVOBACTERIUM PSYCHROPHILUM 2/8, AEROMONAS HYDROPHILA 1/8	
1997	LEMHI RIVER	CHINOOK CAPTIVE	98-457	11/2/98				+				+			DIAGNOSTIC	RS, WHD; FAT 01, ELISA 1/1 (O.D.=0.124), WHD 1/1 (DIGEST ONLY)	
SOUTH FORK TRAP																	
BROOD	S.F. SALMON RIVER	SUMMER CHINOOK	98-260	8/1/98				-							INSPECTION	NO PATHOGENS DETECTED; ELISA 0/1	
BROOD	JOHNSON CREEK	SUMMER CHINOOK	98-261	8/1/98	-	-		-							INSPECTION	NO PATHOGENS DETECTED; VIRO 01, ELISA 0/1	
BROOD	S.F. SALMON RIVER	SUMMER CHINOOK	98-269	8/14/98				+							INSPECTION	BKD; ELISA 7/8 (6 LOW, 1 HIGH)	
BROOD	S.F. SALMON RIVER	SUMMER CHINOOK	98-273	8/18/98	-	-		+							INSPECTION	RS; VIRO 09; ELISA 4/9 (ALL LOW)	
BROOD	JOHNSON CREEK	SUMMER CHINOOK	98-274	8/18/98	-	-		-							INSPECTION	NO PATHOGENS DETECTED; VIRO 02, ELISA 02	
BROOD	JOHNSON CREEK	SUMMER CHINOOK	98-283	8/21/98	-	-		+							INSPECTION	BKD; VIRO 06; ELISA 2/4 (BOTH HIGH)	
BROOD	S.F. SALMON RIVER	SUMMER CHINOOK	98-284	8/21/98				+							INSPECTION	RS; ELISA 2/7 (LOW)	
BROOD	S.F. SALMON RIVER	SUMMER CHINOOK	98-288	8/25/98	-	-		+							INSPECTION	BKD; VIRO 041, ELISA 21/43 (14 LOW, 7 HIGH)	
BROOD	JOHNSON CREEK	SUMMER CHINOOK	98-289	8/25/98	-	-		+							INSPECTION	BKD; ELISA 5/6 (4 LOW, 1 HIGH)	
BROOD	S.F. SALMON RIVER	SUMMER CHINOOK	98-300A	8/28/98				+							INSPECTION	BKD; ELISA 62/68 (51 LOW, 11 HIGH)	
BROOD	S.F. SALMON RIVER	SUMMER CHINOOK	98-300B	8/28/98											INSPECTION	SEE ACCESSION 98-300A	
BROOD	JOHNSON CREEK	SUMMER CHINOOK	98-301	8/28/98				+							INSPECTION	BKD; ELISA 4/4 (3 LOW, 1 HIGH)	
BROOD	S.F. SALMON RIVER	SUMMER CHINOOK	98-307A	9/1/98	-	-		+							INSPECTION	BKD; VIRO 0/10, ELISA 61/83 (58 LOW, 3 HIGH)	
BROOD	S.F. SALMON RIVER	SUMMER CHINOOK	98-307B	9/1/98											INSPECTION	SEE ACCESSION 98-307A	
BROOD	JOHNSON CREEK	SUMMER CHINOOK	98-308	9/1/98				+							INSPECTION	RS; ELISA 1/7 (LOW)	
BROOD	S.F. SALMON RIVER	SUMMER CHINOOK	98-320	9/4/98				+							INSPECTION	BKD; ELISA 33/45 (26 LOW, 7 HIGH)	

LOCATION		Class		Sample		Diagnoses										
BroodYr	Stock	Species	Log #	Date	JHM	IPM	EIBS	BKD	FUR	ERM	CWD	WHD	CSH	ICH	ExamType	Diagnoses
BROOD	JOHNSON CREEK	SUMMER CHINOOK	98-321	9/4/98	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	INSPECTION	RS: ELISA 2/6 (BOTH LOW)
BROOD	S.F. SALMON RIVER	SUMMER CHINOOK	98-328	9/8/98	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	INSPECTION	BKD, ELISA 9/12 (8 LOW, 1 HIGH)
BROOD	S.F. SALMON RIVER	SUMMER CHINOOK	98-335	9/11/98	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	INSPECTION	BKD, ELISA 12/15 (11 LOW, 1 HIGH)
BROOD	S.F. SALMON RIVER	SUMMER CHINOOK	98-340	9/15/98	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	DIAGNOSTIC	BKD, ELISA 7/9 (4 LOW, 3 HIGH)
BROOD	JOHNSON CREEK	SUMMER CHINOOK	98-381	10/13/98	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-	<input type="checkbox"/>	<input type="checkbox"/>	INSPECTION	NO PATHOGENS DETECTED; WHD 0/9
BROOD	S.F. SALMON RIVER	SUMMER CHINOOK	98-382	10/13/98	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-	<input type="checkbox"/>	<input type="checkbox"/>	INSPECTION	NO PATHOGENS DETECTED; WHD 0/20

IDAHO DEPARTMENT OF FISH AND GAME FISH HATCHERIES



Submitted by:

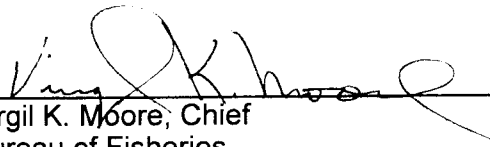
Keith Johnson
Fish Pathologist Supervisor

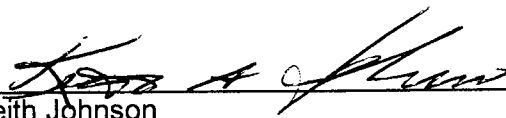
Douglas Burton
Resident Fish Pathologist

A. Douglas Munson
Anadromous Fish Pathologist

Approved by:

Idaho Department Of Fish and Game


Virgil K. Moore, Chief
Bureau of Fisheries


Keith Johnson
Fish Pathologist Supervisor